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ARMY MEDICAL DEPARTMENT.

REPORT

FOR THE YEAR 1882.

VOLUME XXIV.

LONDON:
PRINTED BY EYRE AND SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

1884.

TO THE RIGHT HONOURABLE

THE SECRETARY OF STATE FOR WAR.

SIR,

IN accordance with instructions laid down for the conduct of business by the Director-General and Heads of Branches of the Army Medical Department, I have the honour to submit the accompanying Report on the Health of the Army in 1882, drawn up by the Officers in charge of the respective Branches.

I have the honour to be,
SIR,
Your most obedient
Humble Servant,
T. CRAWFORD,
Director-General.

ARMY MEDICAL DEPARTMENT,
June 1884.

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ARMY MEDICAL DEPARTMENT REPORT FOR 1882.

STATISTICAL REPORT.

Troops at Home and Abroad.

THE average annual strength of the troops serving at home and abroad in 1882, as computed from the returns received by the Army Medical Department, was 174,557 warrant officers, non-commissioned officers, and men (exclusive of the Royal Malta Fencible Artillery, the 1st and 2nd West India Regiments, and the Gun Lascars at Ceylon, and at Hong Kong, Corps which are not recruited at home); the admissions into hospital in this force were 190,880 and the deaths 2,145. The rates represented by these numbers are for admissions into hospital 1093·5, and for deaths 12·06 per 1,000 of the average annual strength, the latter being calculated on a strength of 177,785, which includes detached men.

The statistics of some of the most important of the results of sickness, in every Command in which the troops were stationed, are exhibited in the following Table:—

1882.

White Troops.	Average Annual Strength.	Admitted into Hospital.	Died.	Sent Home as Invalids.	Discharged as Invalids.	Constantly non-effective from Sickness.
Troops at Home and Abroad	**174,557**	**190,880**	**2,145**	**5,770**	**3,389**	**8932·63**
United Kingdom	86,847	74,008	625	—	2,212	4092·04
Gibraltar	4,558	8,772	47	67	44	229·53
Malta	4,619	8,715	41	168	93	241·82
Cyprus	595	609	7	14	—	27·90
Egypt	6,198	14,392	551	3,229	49	—
Canada	1,892	1,344	7	21	46	62·22
Bermuda	1,446	956	13	23	11	47·79
West Indies	492	332	5	5	6	18·34
Cape of Good Hope and St. Helena	3,944	2,749	77	133	124	224 14
Mauritius	382	946	5	9	6	36·36
Ceylon	990	1,185	8	56	18	62·35
China and Straits Settlements	1,663	1,585	10	87	34	83·77
India	57,344	82,415	735	1,958	746	3806·37
On board Ship	3,587	2,872	14	—	—	—

Troops at Home and Abroad.

1882.

White Troops.	Ratio per 1,000 of Strength.					Average sick-time to each Soldier.	Average duration of each case of Sickness.
	Admitted.	Died.	Sent Home as Invalids.	Discharged as Invalids.	Constantly non-effective from Sickness.		
	*	†	‡	§	‖	Days.‖	Days.‖
Troops at Home and Abroad	**1093·5**	**12·06**	**68·59**	**19·45**	**54·21**	**19·79**	**18·78**
United Kingdom	852·2	6·94	—	24·55	47·12	17·20	20·18
Gibraltar	816·6	10·31	14·70	9·65	50·35	18·38	22·51
Malta	804·3	8·88	36·37	20·13	52·35	19·11	23·76
Cyprus	1023·6	11·76	23·52	—	46·89	17·11	16·72
Egypt	2322·0	88·90	520·97	7·90	—	—	—
Canada	710·4	3·70	11·10	24·31	32·88	12·00	16·90
Bermuda	661·1	8·99	15·91	7·60	33·04	12·06	18·25
West Indies	674·8	10·16	10·16	12·19	37·28	13·61	20·16
Cape of Good Hope and St. Helena	697·0	19·52	33·72	31·44	56·88	20·56	29·50
Mauritius	2476·4	13·08	23·56	15·70	95·18	34·74	14·03
Ceylon	1197·0	8·08	56·56	18·18	62·98	22·99	19·20
China and Straits Settlements	953·1	6·01	52·31	20·45	50·37	18·39	19·29
India	1437·2	12·82	34·14	13·01	66·38	24·23	16·86
On board Ship	800·7	3·90	—	—	—	—	—

* Calculated on strength, excluding men detached (3,228).
† Calculated on strength, including men detached.
‡ Calculated on strength, excluding United Kingdom and troops on board ship.
§ Calculated on strength, including men detached, and excluding troops on board ship.
‖ Calculations exclude men detached, troops on board ship, and Egypt.

1872 to 1881.

White Troops.	Aggregate strength for 10 years.	Admissions into Hospital.	Deaths.	Sent Home as Invalids.	Discharged as Invalids.	Constantly non-effective from Sickness.
Troops at Home and Abroad	**1,706,711**	**1,778,100**	**22,246**	**31,196**	**37,755**	**80,634**
United Kingdom	886,526	730,933	7,334	—	25,107	36,383
Gibraltar	45,309	31,241	296	1,389	707	1,784
Malta	48,801	42,777	472	1,386	783	2,251
*Cyprus	2,397	5,601	53	173	64	270
Canada	16,906	11,358	110	365	262	537
Bermuda	18,880	11,966	145	374	246	620
West Indies	11,369	10,662	175	271	154	490
Cape of Good Hope and St. Helena	50,961	44,083	2,076	2,876	1,003	2,510
Mauritius	4,089	8,023	70	172	62	250
Ceylon	10,016	9,942	157	335	144	520
China and Straits Settlements	19,214	22,023	248	787	311	936
India	568,818	835,300	10,931	23,068	8,912	34,083
On board Ship	23,425	14,191	179	—	—	—

* For four years only.

1872 to 1881.

Troops at Home and Abroad.

White Troops.	Ratio per 1,000 of Strength.					Average sick-time to each Soldier.	Average duration of each case of Sickness.
	Admitted.	Died.	Sent Home as Invalids.	Discharged as Invalids.	Constantly non-effective from Sickness.		
						Days.	Days.
Troops at Home and Abroad	**1041·8**	**12·66**	**39·15**	**21·78**	**47·90**	**17·48**	**16·69**
United Kingdom -	824·5	7·83	—	26·80	41·04	14·98	18·17
Gibraltar - -	689·5	6·53	30·66	15·60	39·37	14·37	20·84
Malta - -	876·6	9·67	28·40	16·05	46·18	16·84	19·21
*Cyprus - -	2336·7	22·11	72·17	26·70	112·64	41·11	17·59
Canada - -	671·8	6·51	21·59	15·50	31·76	11·59	17·26
Bermuda - -	633·8	7·68	19·81	13·03	32·84	11·99	18·91
West Indies - -	937·8	15·89	23·84	13·55	43·10	15·73	16·77
Cape of Good Hope and St. Helena -	865·0	40·74	56·44	19·68	49·25	17·98	20·78
Mauritius - -	1962·1	17·12	42·06	15·16	61·14	22·32	11·37
Ceylon - -	992·6	15·67	33·45	14·38	51·92	18·95	19·09
China and Straits Settlements -	1146·2	12·91	40·96	16·19	48·72	17·78	15·51
India - - -	1468·5	19·22	40·55	15·67	59·92	21·87	14·89
On board Ship -	605·8	7·64	—	—	—	—	—

* For four years only.

United Kingdom.

II.—ON THE HEALTH OF THE TROOPS SERVING IN THE UNITED KINGDOM.

Sickness and Mortality.

The average annual strength of the non-commissioned officers and men serving in the United Kingdom during the year, calculated from the returns received from the Medical Officers, was 86,847, the admissions into hospital were 74,008, the deaths 625 (including 43 among men detached from their corps, the average number of whom is given in the Adjutant General's return as 3,228), and the number of invalids discharged the service 2,212.

The daily average number of men non-effective through sickness was 4,092·04, the average sick time to each soldier was 17·20 days, and the average duration of each case of sickness 20·18 days.

The annual admission rate was therefore 852·2 per 1,000, the death rate 6·94, the rate of discharged the service by invaliding 24·55, and the rate constantly sick 47·12 per 1,000. As compared with the corresponding rates for the previous year, a decrease of 37·5 per 1,000 has occurred in the admission rate, one of ·51 per 1,000 in the death rate, and a fractional decrease in that of men constantly sick, but an increase of 2·36 per 1,000 is noticed in the rate of discharge by invaliding.

In comparison with similar rates for the average of the preceding 10 years an increase is observed of 27·7 per 1,000 in the rate of admission, and of 6·08 per 1,000 in that of men constantly sick, while a decrease of ·89 per 1,000 is found in the rate of mortality, and one of 2·25 per 1,000 in that of discharge by invaliding. The average sick time to each soldier was less by ·10 days than in the preceding year, but the average duration of each case of sickness was greater by ·73 days; and in comparison with the average of the 10 previous years an increase is noticed in both periods, amounting to 2·22 and 2·01 days respectively.

The admissions, deaths, and other results in the various classes and orders of diseases are shown in Abstract No. I., and similar information for the different military districts will be found in the Abstracts lettered from A. to N.

General Diseases.—*Febrile group.*—3,332 admissions and 66 deaths occurred during the year under this head, the rate of prevalence, 38·4 per 1,000, being less than that in the previous year by 6·2 per 1,000, but the rate of mortality ·73 per 1,000 is greater by ·26 per 1,000. The admission rate is below, but the death rate above the average.

Eruptive Fevers.—The admissions numbered 547 and the deaths 9, or 6·3 and ·10 per 1,000 respectively. Fourteen of the admissions and one of the deaths were due to small-pox. Five cases occurred in Aldershot, three at Woolwich, three in Dublin, one in Bodmin, and one in Chatham; all the foregoing recovered. The remaining case, which proved fatal, occurred at Belfast.

Scarlet fever caused 142 admissions and 8 deaths; the number of admissions was less by 56 than in the previous year, but of deaths the same. The greatest number of cases occurred in the Dublin district, 45 with 4 deaths—(it is reported that a grave type of disease existed at the Curragh from May to October, causing 35 admissions and 3 deaths)—this is followed by Chatham with 23 cases and 1 death, the Home District with 15 and 1 death, Aldershot 13 cases, Southern district 10 cases and 1 death, Cork 5 cases and 1 death, and others. Measles was more prevalent than in 1881, and caused 308 admissions, scattered through the various districts. Dublin and Aldershot were the two particularly affected, the admissions being 115 and 113 respectively.

Continued fevers caused 1,227 admissions and 46 deaths, being in the respective ratios of 14·1 and ·51 per 1,000, the former being somewhat less than and the latter twice as great as in the preceding year. Enteric fever was the chief cause of the mortality. *United Kingdom.*

Nine cases of typhus fever are returned; 5 occurred in the Dublin district, one being fatal, 2 in Cork, and 1 in the Chatham and South-eastern districts respectively, both of them fatal.

Enteric fever caused 178 admissions and 42 deaths, or 2·0 and ·47 per 1,000 respectively as compared with 79 admissions and 16 deaths in the previous year. The great increase in the prevalence of this disease is principally due to the occurrence of cases among men recently returned from active service in Egypt. No district was free from the disease, but those in which the greatest number of cases occurred were the Home, Dublin, Aldershot, Southern, and Northern districts.

In the Home district 56 cases and 7 deaths are returned, 50 cases and all the deaths occurred in London, and 5 cases happened at Windsor; these were chiefly in the regiments who had returned from service in Egypt. The remaining case in this district happened in Oxford.

In the Dublin district 29 cases and 6 deaths happened, 27 and 5 deaths occurring in Dublin, and 2 and 1 death in Athlone.

Several of the cases in the former place originated in the Royal Barracks, which are reported to have been badly constructed originally, too close to the River Liffey, and to have faulty drainage; various sanitary improvements have since been undertaken. Of the two cases that occurred at Athlone it is stated that in neither instance could the disease be traced to defective sanitation.

At Aldershot 25 cases and 10 deaths are returned, out of which it is stated that 22 admissions and 5 deaths occurred in corps recently from Egypt. The remaining cases occurred in the South Camp and do not appear to have been traced to any direct insanitary condition. In the Southern district 16 cases and 1 death occurred, 5 being in Gosport, 3 in Portsmouth, 4 in Netley, &c.; in the majority of these cases also the disease is said to have been due to service in the Egyptian campaign. In the Northern district there were 14 cases and 5 deaths; 4 admissions took place at Coventry, 3 in Liverpool, 2 in York; no special cause of disease is given; of two cases in Manchester one is attributed to Egypt. In the remaining districts the cases were fewer in number, varying from nine in the South-eastern district to one in the Woolwich, North British, and Channel Islands districts respectively. At Colchester 5 cases occurred, no cause discoverable; at Brighton and Shorncliffe 4 each, in men from Egypt; at Chatham 3, two being due to Egypt and one obscure; 3 at Devonport, no cause given; 2 at Pembroke and Cork respectively; and one each at various other stations.

The admissions for simple continued fever and febricula though numerous, being 1,040, or at the rate of 12·0 per 1,000, were less than in the previous year, the decrease of admission rate being 3·1 per 1,000. One death was returned from simple continued fever at Castlebar, but the subsequent occurrence of enteric fever at this station, and the discovery of sewage contamination of the wells leads to the belief that this case was probably one of the latter disease. These fevers were most prevalent in the Irish districts, followed by the Home and Aldershot districts in England.

Paroxysmal Fevers.—Among 970 admissions in all were 21 cases of remittent fever, two of them being fatal, and out of the 949 remaining cases of ague one is returned as fatal. The admission rate, 11·2 per 1,000, is less than that for the previous year by 2·2; the death rate, ·03 per 1,000, shows no change. These fevers were most prevalent in the Southern, South-eastern, Northern, and Eastern districts.

Under the head of *other diseases* of the febrile group we find 588 admissions and 8 deaths, the admission rate, 6·8 per 1,000, being less than in the preceding year by 1·6, the death rate ·09 being an increase of ·02 per 1,000. The disease causing most admissions was erysipelas, these amounted to 269 with 4 deaths. The largest number of cases in any one district, as last year, occurred at Aldershot, 53 are returned, which, however, is 47 less than in 1881. The Principal Medical Officer states that "none could be traced to any sani-" tary defect in the quarters where they originated or in the vicinity." In the Dublin district 42 cases and 3 deaths occurred, 16 attacks and 3 deaths

United Kingdom.

being at the Curragh, in the Cork district 27 cases and no deaths are returned, in the Northern district 21 cases, in the Home district 20, in that of Chatham 18 with one death, and lesser numbers in all the remaining districts, but no fatal cases. The Channel Islands had the lowest number of admissions, five.

Four cases and three deaths are returned, caused by pyæmia; one case occurred at the Curragh in a man of the Army Hospital Corps, who was accidentally pricked in the arm at a post-mortem examination on a case of the same disease; he was shortly afterwards admitted to hospital, pyæmic abscesses formed in various parts of the body, but after some considerable time he recovered. Another case happened at Newbridge; this proved fatal. It is stated that the patient was originally admitted for mumps, but large abscesses in the parotid gland and the tissues of the neck resulted and pyæmia supervened. A third case occurred at Cork and was fatal, and one more happened in Aberdeen, also fatal.

Diphtheria caused 3 admissions, one (fatal) at the Curragh, one in the Northern and one in the Southern district.

CONSTITUTIONAL DISEASES.—These caused in all 15,638 admissions and 191 deaths, being in the respective annual ratios of 180·1 and 2·12 per 1,000, which show a decrease of 7·1 and ·38 per 1,000 on the corresponding rates for the preceding year.

Rheumatism.—The admissions for all forms of this affection amounted to 3,425, being at the rate of 39·4 per 1,000, a decrease of 3·7 on the similar rate for the preceding year. Four deaths occurred from acute rheumatism, one at Aldershot, Windsor, Gravesend, and Weedon respectively. The highest rate of prevalence of rheumatic affections in the different districts is found in that of Chatham, 55·1 per 1,000, followed by the South-eastern district and Aldershot with 45·9 each, and others with lesser rates, Woolwich showing the lowest, 25·9 per 1,000. All the Irish districts have comparatively low admission rates for these affections, the highest, that of Dublin, being 36·6 per 1,000, then that of Cork, 31·4, and lowest, Belfast, only 26·6 per 1,000. The last-named district shows a great contrast to the previous year, when it had the highest rate of prevalence of all, 60·8 per 1,000.

Syphilis.—The number of admissions for primary syphilis was 8,857, and for the secondary form 2,413, being in the annual ratios of 102·0 and 27·8 per 1,000 respectively, the former being fractionally greater and the latter 2·9 per 1,000 lower than the similar rate in the preceding year. Two deaths occurred from secondary syphilis.

Including gonorrhœa and its sequelæ, the admission rate for all forms of venereal disease amounted to 246·0 per 1,000, and the rate constantly sick from these diseases to 16·86 per 1,000, both of them being almost identical with the corresponding rates for the previous year; they are, however, somewhat in excess of those of the average of the three previous years, the former by 21·8 and the latter by 2·04 per 1,000.

The admission rates varied considerably in the different districts, that for primary syphilis being highest in the Dublin district, 149·3 per 1,000, the Home 147·4, and Northern districts 141·9 per 1,000, and lowest in the South-eastern district 42·3 per 1,000, Cork, 54·8, and Woolwich 64·2 per 1,000.

Secondary syphilis shows the highest rates of admission in the Channel Islands, Dublin, and Home districts, and lowest in the Chatham, Belfast, and Western districts.

In continuation of the statistical information given in the reports of previous years, the admissions for primary venereal sores and gonorrhœa at certain large stations in the United Kingdom, and their rates per 1,000 of the average annual strength, are shown in the following Table:—

United Kingdom.

Stations under the Act.

Stations.	Average Annual Strength.	Admitted for Primary Venereal Sores.	Admitted for Gonorrhœa.	Ratio per 1,000 of the Strength admitted for Primary Venereal Sores.	Ratio per 1,000 of the Strength admitted for Gonorrhœa.
Devonport and Plymouth	2,414	179	427	74	177
Portsmouth	4,015	247	485	61	121
Chatham, Sheerness, and Gravesend.	4,103	290	416	71	101
Woolwich	4,445	284	271	64	61
Aldershot	10,642	1,228	1,319	115	124
Windsor	954	110	56	115	59
Shorncliffe	1,718	84	131	49	76
Colchester	2,276	140	208	61	89
Winchester	713	47	62	66	87
Dover	2,152	61	122	28	57
Canterbury	1,391	75	179	54	129
Maidstone	199	10	8	50	40
Cork	2,111	140	96	66	45
Curragh	4,650	380	424	82	91
Total of 14 stations under the Act	41,783	3,275	4,199	78	100

Stations *not* under the Act.

Stations.	Average Annual Strength.	Admitted for Primary Venereal Sores.	Admitted for Gonorrhœa	Ratio per 1,000 of the Strength admitted for Primary Venereal Sores.	Ratio per 1,000 of the Strength admitted for Gonorrhœa.
Isle of Wight	773	95	88	123	114
London	4,419	813	411	184	93
Warley	542	92	86	170	159
Hounslow	750	48	48	64	64
Pembroke Dock	891	62	60	70	67
Sheffield	646	170	144	263	223
Manchester	992	285	244	287	246
Preston	728	50	51	69	70
Edinburgh	1,059	108	117	102	110
Fermoy	1,030	71	50	69	49
Limerick	1,215	99	98	81	81
Athlone	782	12	48	15	61
Dublin	4,841	1,474	1,044	304	216
Belfast	781	102	129	131	165
Total of 14 stations *not* under the Act	19,449	3,481	2,618	179	135

United Kingdom.

These stations were originally chosen for the purposes of comparison upon the princ that it was advisable to take no station where the strength was on an average under that small detachments would produce grave irregularities in the figures, and that it wo be unfair to compare very small stations with those in which the Act is in force. W regard to the remaining unprotected stations it may be added that in addition to the lim number of troops at many of them, the greater number are situated in country distr where there is but little prostitution and consequently little or no disease, this also wo render comparison unfair.

The group of 14 stations under the Act shows an increase of 4 per 1,000 in the r of men admitted for primary venereal sores as compared with the corresponding rate of preceding year; the contrasted group of 14 stations not under the Act shows a decr of 2 per 1,000 men.

Stations.	Rate of Admissions into Hospital per 1,000 of Mean Strength for Primary Venereal Sores in—														
	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.*	1875.*	1876.*	1877.*	1878.*	1879.*	1880.	1881.
Devonport and Plymouth.	76	66	74	58	50	59	37	36	29	27	28	34	33	50	51
Portsmouth	116	86	62	51	41	40	44	48	30	27	27	15	27	76	57
Chatham and Sheerness.	71	63	41	47	65	49	41	33	17	33	43	49	51	62	63
Woolwich	88	46	52		58	60	60	47	59	42	29	38	44	73	63
Aldershot	81	77	63	67	65	62	72	52	46	47	46	53	56	74	100
Windsor	58	136	93	67	78	96	84	63	41	41	80	39	46	106	163
Shorncliffe	42	77	60	100	30	33	21	14	18	22	21	41	68	86	34
Colchester	145	182	85	42	32	55	42	20	32	30	52	19	37	43	85
Winchester	52	104	101	61	29	57	27	38	27	20	18	38	23	45	52
Dover	132	111	80	30	24	47	38	37	27	30	19	31	36	49	50
Canterbury	119	114	45	152	38	43	20	36	12	27	19	27	34	75	86
Maidstone	242	122	128	68	44	57	59	66	7	28	34	7	19	43	45
Cork	72	61	73	68	55	62	61	26	21	21	16	36	29	72	53
Curragh	104	85	88	56	35	50	30	46	35	18	38	54	77	124	63
Isle of Wight	59	103	129	64	66	57	37	89	89	54	51	50	56	69	74
London	163	148	144	160	190	199	185	179	187	146	166	250	173	225	219
Warley	74	92	61	55	57	66	22	32	37	51	59	140	120	67	121
Hounslow	62	106	85	88	45	90	67	68	24	75	48	40	19	117	121
Pembroke Dock.	28	35	51	54	28	27	25	21	31	29	16	12	15	64	96
Sheffield	163	107	146	77	126	96	71	49	87	119	64	96	132	154	279
Manchester	177	115	160	92	70	96	91	106	89	113	131	205	205	232	228
Preston	87	87	172	134	75	114	123	97	57	77	77	73	57	98	104
Edinburgh	63	46	60	99	69	43	44	25	27	89	47	72	80	75	94
Fermoy	70	47	116	89	33	56	21	10	12	31	29	26	33	94	84
Limerick	117	114	54	136	57	100	78	58	25	47	75	85	28	62	143
Athlone	85	38	42	44	47	14	14	8	10	8	35	29	15	49	36
Dublin	129	139	180	128	117	165	136	95	73	76	103	154	117	216	269
Belfast	89	56	52	43	61	78	103	64	44	57	43	66	124	273	183

* In October 1873 a Royal Warrant was promulgated, directing that soldiers admitted into hospital on account of venereal disease should forfeit their pay whilst under treatment. This Warrant was cancelled by another dated 27th November 1879.

The results obtained by a different grouping of the stations in the United Kingdom are shown in the following Table :— *United Kingdom.*

Groups.	Average Annual Strength.	Admissions into Hospital for Primary Venereal Sores.	Ratio per 1,000 of the Strength of Admissions for Primary Venereal Sores.
The 14 stations under the Contagious Diseases Act.	41,783	3,275	78
All other stations - -	45,064	5,582	124
Total -	86,847	8,857	102

No admissions for this disease are returned at 33 stations having an aggregate average annual strength of 1,239 men.

TABLES relating to the CONTAGIOUS DISEASES ACTS, as regards the ARMY, contrasting the Results at 28 Large Stations, 14 under the Act, and 14 not under the Act, selected for comparison with the former, as previously shown, being all at which the Force was 500 Men and upwards, when the first Act was applied.

I.—TABLES showing the Admissions into Hospital for Primary Venereal Sores and for Gonorrhœa at the 28 Stations above described, from 1860.

Year.	The Fourteen Stations successively brought under the Acts.					Fourteen Large Stations not under the Acts.				
	Average Annual Strength.	Admissions into Hospital for Primary Venereal Sores.	Admissions into Hospital from Gonorrhœa.	Ratio per 1,000 of the Strength. Primary Venereal Sores.	Ratio per 1,000 of the Strength. Gonorrhœa.	Average Annual Strength.	Admissions into Hospital for Primary Venereal Sores.	Admissions into Hospital from Gonorrhœa.	Ratio per 1,000 of the Strength. Primary Venereal Sores.	Ratio per 1,000 of the Strength. Gonorrhœa.
1860 - - -	57,479	8,405	7,966	146	139	17,118	2,292	2,374	134	139
1861 - - -	51,328	7,267	7,133	142	139	17,126	2,049	2,023	120	118
1862 - - -	45,322	5,314	6,283	117	139	15,026	1,500	2,070	100	138
1863 - - -	43,419	4,653	5,202	107	120	15,132	1,612	1,816	107	120
Totals for 4 years -	197,548	25,639	26,584	—	—	64,402	7,453	8,283	—	—
Average for 1860-63 -	49,387	6,410	6,646	130	135	16,100	1,863	2,071	116	129
1864 - - -	40,694	4,135	4,803	102	118	14,894	1,647	1,636	111	110
1865 - - -	43,078	4,077	4,937	95	115	14,091	1,418	1,968	101	140
1866 - - -	39,476	3,444	4,573	87	116	14,595	1,154	1,663	79	114
1867 - - -	39,911	3,640	5,274	91	132	20,589	2,372	2,670	115	130
1868 - - -	42,595	3,533	5,685	83	133	19,486	2,130	2,256	109	115
1869 - - -	42,017	2,765	4,466	66	106	17,739	2,273	1,856	128	105
Totals for 6 years -	247,771	21,594	29,738	—	—	101,394	10,994	12,029	—	—
Average for 1864-69 -	41,295	3,599	4,956	87	120	16,899	1,832	2,005	108	119
1870 - - -	41,580	2,268	4,061	55	98	17,852	2,022	1,723	113	96
1871 - - -	54,096	2,763	6,254	51	116	19,957	1,865	2,137	93	107
1872 - - -	50,794	2,752	5,280	54	104	19,950	2,457	2,113	123	106
1873 - - -	48,039	2,420	3,946	50	82	19,801	2,025	1,888	102	95
1874 - - -	48,136	2,039	2,968	42	62	18,879	1,661	1,450	88	77
1875 - - -	48,606	1,717	2,825	35	58	19,573	1,552	1,405	79	72
1876 - - -	48,620	1,622	3,302	33	68	18,790	1,554	1,677	82	89
1877 - - -	52,422	1,809	3,585	35	68	19,076	1,730	2,234	91	117
1878 - - -	55,813	2,235	4,352	40	78	20,749	2,723	2,508	131	121
1879 - - -	42,646	2,005	2,939	47	69	18,058	1,943	1,719	108	95
1880 - - -	44,026	3,280	4,387	74	100	18,054	3,010	2,305	167	128
1881 - - -	39,558	2,920	3,821	74	97	19,643	3,559	2,403	181	122
1882 - - -	41,783	3,275	4,199	78	100	19,449	3,481	2,618	179	135
Totals for 13 years	616,119	31,105	51,939	—	—	249,831	29,582	26,180	—	—
Average for 1870-82 -	47,394	2,393	3,995	50	84	19,218	2,276	2,014	118	105

United Kingdom.

N.B.—For the years 1860–66 inclusive, Windsor has been omitted from the group of stations under the Act, and London from that *not* under the Act, as the returns for those years do not afford the necessary information.

II.—TABLES showing the Number of Men always in Hospital with Primary Venereal Sores at the 28 Stations above described, in each Year, from 1870 to 1882, inclusive.

Year.	Under the Act.			Not under the Act.		
	Average Annual Strength.	Constantly in Hospital with Primary Venereal Sores.	Ratio per 1,000 of the Strength.	Average Annual Strength.	Constantly in Hospital with Primary Venereal Sores.	Ratio per 1,000 of the Strength.
1870	41,580	186	4·46	17,852	174	9·74
1871	54,096	210	3·89	19,957	161	8·07
1872	50,794	232	4·56	19,950	225	11·29
1873	48,039	214	4·45	19,801	175	8·86
1874	48,136	150	3·11	18,879	130	6·89
1875	48,606	129	2·66	19,573	115	5·88
1876	48,620	120	2·47	18,790	112	5·94
1877	52,422	137	2·61	19,076	119	6·23
1878	55,813	175	3·14	20,749	185	8·90
1879	42,646	154	3·61	18,058	149	8·25
1880	44,026	252	5·72	18,054	218	12·07
1881	39,558	218	5·51	19,643	276	14·05
1882	41,783	272	6·51	19,449	244	12·54
Total	616,119	2,449	—	249,831	2,283	—
Average for 13 years	47,394	188	3·97	19,218	176	9·16

For the four years (1860–63) preceding that in which the first Contagious Diseases Act was passed, the average rate of prevalence of primary venereal sores at a group of stations, each of which was successively placed under the Act, is 130, and that for gonorrhœa is 135 per 1,000 of the strength. At another group of 14 stations (originally selected for comparison because at the time the stations comprised in it were large ones, that is, had not less than 500 men) the rate of prevalence of primary venereal sores is 116, and that for gonorrhœa is 129 per 1,000 of the strength.

In the next period shown (1864–69) the Act was applied successively at each of the stations in the subjected group; in 1865 it was in operation at three stations, in 1866 at four, in 1867 at five, in 1868 at eight, in 1869 at 10, in 1870 it was in operation at all the 14 stations. During this period the average rate of prevalence of primary venereal sores fell to 87 per 1,000 of the strength, in the subjected group; in the contrasted group of large stations it fell to 108 per 1,000 of the strength. The result, therefore, is that the subjected group of stations which before the application of the Act had a rate of prevalence 14 per 1,000 higher than the unsubjected group, for the period of its partial application, has a rate of prevalence 21 per 1,000 lower than that of the unsubjected group.

In the third period shown (1870–82) the Act was in force for the whole time at every one of the stations in the subjected group, and the average rate of prevalence of the disease was 50 per 1,000 men, an average rate higher by 2 per 1,000 when compared with that for the period 1870 to 1881; in the unsubjected group the rate was 118 per 1,000 men, an average rate higher by 6 per 1,000 when compared with that for the period from 1870 to 1881.

The rate of prevalence of gonorrhœa in the first years of the application of the Act did not materially differ in the two groups of stations; in the last years, however, the results are favourable for the subjected group, the rate of which in 1882, was 100 per 1,000, a rate lower by 35 per 1,000 than that of the unsubjected one.

In Table II. the average number of men always in hospital on account of primary venereal sores at each of the groups of stations for the years 1870–82 is shown. The average rate of the subjected group is less than the half of that of the unsubjected group.

Tubercular Diseases.—There were 836 admissions and 180 deaths, being in the ratios of 9·6 and 2·00 per 1,000 respectively, both rates being fractionally less than those in the preceding year. *United Kingdom.*

These diseases have been most prevalent in the Northern, North British, and Western districts, and least in the South-eastern, Channel Islands, and Belfast, the rate ranging from 13·3 in the first named to 5·7 per 1,000 in the last.

The greater number of the admissions were caused by phthisis pulmonalis, and out of the total number of deaths, 168 were caused by this disease.

Scurvy and Purpura show only 7 admissions as compared with 26 in the preceding year. There was no death; 3 of the cases occurred at Aldershot, and one each in the Northern, Southern, Chatham, and Belfast districts.

Other diseases of this group caused 100 admissions and 5 deaths; the resulting ratios per 1,000 both show a decrease on those for the previous year. The deaths were caused by diabetes in 4 cases and by cancer in one.

LOCAL DISEASES.—*Diseases of the nervous system* caused 1,006 admissions and 36 deaths, being in the respective ratios of 11·6 and ·40 per 1,000, which are less than those of the preceding year by 1·4 and ·20 per 1,000, and are also below the average. The chief causes of mortality were apoplexy 13 cases, meningitis 10, abscess of brain 5, and encephalitis 4 cases.

The admissions for mental disease were 209 in number, and 89 men were finally discharged the service from these affections.

Diseases of the Eye caused 1,317 admissions, equal to 15·2 per 1,000, being an increase of 1·2 on the preceding year; the admission rates for *diseases of the ear and nose*, 5·7 and 5·0 per 1,000 respectively, differing very slightly from those of the previous year; and all are close to the average rates.

Diseases of the Circulatory System.—The number of admissions under this head, 1,289, gives an admission rate of 14·8 per 1,000; there were 65 deaths, or ·72 per 1,000, both of these rates differing very slightly from those of the foregoing year, and both being about the average of those for the previous three years. The admission rates in the different districts vary a great deal, ranging from 32·2 per 1,000 in the Chatham district to 5·7 per 1,000 in that of the Belfast district. The principal causes of death were valvular disease of the heart 35 cases, aneurism of aorta 9, pericarditis 8, and fatty degeneration of the heart 5 cases.

Diseases of the Absorbent System caused 981 admissions and one death, from inflammation of glands. The admission rate 11·3 per 1,000 hardly differs from that of the previous year, but is somewhat below the average of three previous years.

Diseases of the Respiratory System.—5,691 admissions and 107 deaths under this order of disease give ratios of 65·5 and 1·19 per 1,000, being less than those for the preceding year by 6·9 and ·23 per 1,000 respectively, and are considerably below the average. The greatest rate of prevalence of these diseases, 92·7 per 1,000, as well as the highest rate of mortality, 1·94 per 1,000, is found in the Dublin district, and the lowest rates of both 41·3 and ·41 per 1,000 are found in the Western district. The NorthBritish district which had the highest admission rate in the previous year has decreased by 23·6 per 1,000, the rate for 1882 being only 72·3.

The principal cause of death was pneumonia. Some cases occurred in every district, that of Dublin alone showing 22 deaths, and the Southern district 11, out of a total of 82. Bronchitis caused 11 deaths and pleurisy 6.

Diseases of the Digestive System.—9,768 admissions and 52 deaths are returned from this order of diseases, being in the annual ratios of 112·5 and ·58 per 1,000 respectively. The admission rate is lower by 3·4, and the death rate higher by ·08 per 1,000 than the corresponding rates in the previous year, and both are slightly above the average. The rates of prevalence vary a good deal in the different districts, but were highest in the South-eastern and Southern districts, being 148·6 and 144·7 per 1,000 respectively; the Woolwich district shows the lowest rate, 7·49 per 1,000. The rates of mortality were all fractional with the exception of those in the Southern and South-eastern districts, which were 1·18 and 1·00 per 1,000 respectively.

Out of the total number of deaths, dysentery caused 13, abscess of the liver 10, enteritis 6, hepatitis 5, cirrhosis of the liver 4, splenitis and peritonitis 3 each, and other diseases lesser numbers.

United Kingdom.

Diseases of the Urinary System.—The admissions for gonorrhœa and its sequelæ reached 10,092, or 116·2 per 1,000, which exceeds the rate for the preceding year by 2·8 per 1,000, and the average rate for the previous three years by 9·3 per 1,000. The comparative prevalence of these diseases has been greatest in the Channel Islands, Northern and Western districts, and least in the Woolwich and Cork districts.

The admissions into hospital for gonorrhœa at specified groups of stations in the United Kingdom are shown in the following table:—

Groups.	Average Annual Strength of the Group.	Admissions into Hospital for Gonorrhœa.	Ratio of Admission per 1,000 of Strength.
The 14 stations under the Contagious Diseases Act -	41,783	4,199	100
The 14 large stations not under the Act - - -	19,449	2,618	135
All other stations not under the Act - - -	25,615	2,372	93
Total - - - -	86,847	9,189	106

Other diseases of this group caused 1,114 admissions and 12 deaths, equal to rates of 12·8 and ·13 per 1,000 respectively. Out of the deaths 8 were due to Bright's disease.

Diseases of the Generative System gave an admission rate of 10·6 per 1,000 being a decrease of 1·7 on that for the previous year. *Diseases of the organs of locomotion* with 6·8 per 1,000 show no appreciable change. Four deaths, however, occurred, one from psoas and lumbar abscess, gangrene of the leg, and caries of the vertebræ respectively. *Diseases of the cellular tissue* caused an admission rate of 21·4 per 1,000, a decrease of 2·9 on that for the preceding year. One death is returned.

Diseases of the Cutaneous System caused 9,211 admissions, or at the rate of 106·1 per 1,000, less than in the preceding year by 9·3 per 1,000, and also less than the average of three years by almost the same amount. These diseases call for no special mention.

CONDITIONS.—*Debility.*—981 admissions and one death are returned under this head, being in the ratios of 11·3 and ·01 per 1,000. The death occurred at Tralee in a man who had been ailing for some considerable time with chronic rheumatism and palpitation.

POISONS.—The number of admissions under this head was 205, the admission rate per 1,000 being 2·4, as against 2·2 in the previous year; the deaths numbered 13, or ·15 per 1,000 as against ·17 in 1881. The causes of admission were poisoning by alcohol, 120 cases, delirium tremens 78, poisoning by oxalic acid 3, by opium 2, by cyanide of potassium 1, and poisoned wound 1 case. The deaths were due to alcholic poisoning in six cases, to delirium tremens in four, to opium poisoning in two, and to cyanide of potassium poisoning in one case. Of the two fatal cases of opium poisoning, one (at Aldershot) was accidental, and the other (at Chatham) in a gunner, Royal Artillery, was suicidal; the verdict of the coroner's jury was "temporary insanity." The fatal case of poisoning by cyanide of potassium was also suicidal, and occurred in a gunner, Royal Artillery, at Weedon. Of the three cases of poisoning by oxalic acid none were fatal. In one which occurred at Shorncliffe in a private of the Commissariat and Transport Corps the drug was taken with suicidal intent. In another, at Warley, in a private, Royal Warwickshire Regiment, there was also suicidal intent; and in the third, a gunner, Royal Artillery, at Horfield, it was stated that it was not possible to determine accurately whether the acid was taken intentionally or not.

INJURIES.—Under the head of *general injuries* are 14 admissions and 44 deaths, as against 10 and 46 in the previous year, and being in the ratios of ·2 and ·49 per 1,000 respectively.

The admissions were due to multiple injury in 6 cases, exposure to cold in 6, and burns and scalds in 2 cases.

The deaths were caused as follows:—Asphyxia by drowning 28 cases, multiple injury 8, asphyxia by hanging 5, asphyxia from other causes 2, and lightning stroke 1 case. *United Kingdom.*

Local injuries caused 9,168 admissions and 30 deaths, being in the ratios of 105·5 and ·33 per 1,000 respectively; the former being less by 2·7 and the latter greater by ·08 per 1,000 than the corresponding rates for the previous years. The deaths were due to gun-shot wounds in 16 cases, fracture 6 cases (including 5 of fracture of the skull, and 1 of fracture of the spine); cut throat 4 cases, wound 1, and concussion of the brain in 3 cases.

Two deaths by *homicide* are returned; one occurred at Woolwich by stabbing with a sword stick, and the other in Dublin by gun-shot wound.

The total number of cases of *suicide* amounted to 24, and were caused by gun-shot wounds in 12 cases, cut throat in 4, asphyxia by hanging in 5, multiple injury in 1 case (the man placed himself in front of a railway engine), and by poison in 2 cases (one by opium and the other by cyanide of potassium).

Self-inflicted injuries without fatal results are returned in 12 instances, and were caused as follows: gun-shot wound 3 cases, cut throat 8, and wound (stab of chest) 1.

Surgical Operations.—These comprised two amputations at the shoulder joint, in one case with successful result; in the other, in which amputation was resorted to on account of erysipelas, death occurred from secondary hæmorrhage; an amputation at lower third of thigh for disease of knee joint successful; amputation of fingers three cases with satisfactory results; ligature of the femoral artery successful; extraction of bullets, two successful cases; operations for cataract and for extirpation of the eyeball, with satisfactory results in both cases; successful removal of a non-malignant tumour from face, and of epithelial cancer from lip; operation for stricture of the urethra; for fistula in ano and other minor operations, successful; a case of operation for strangulated hernia was attended with fatal result.

Invaliding.—2,212 men, being at the rate of 24·55 per 1,000 of strength, were discharged the service by invaliding during the year, as compared with 1,953 or 22·19 per 1,000 in the preceding year. The principal causes of invaliding were, rheumatism 119 cases, tubercular diseases 367, diseases of the nervous system 240, of the circulatory system 438, of the digestive system 223, of the organs of locomotion 118, and debility 183 cases. Comparing these as well as other minor causes with those in the preceding year, we find that, generally speaking, there is but little difference between their corresponding rates, the most marked being an increase in the rate for the circulatory system of ·73 per 1,000; in that for debility of ·43, and in that for diseases of the digestive system of ·29 per 1,000.

Dividing the numbers invalided into quinquennial periods of service it is found that 1,063, or 48·05 per cent. of the total number invalided, were discharged as medically unfit during the first five years of service; 453, or 20·48 per cent. between 5 and 10 years' service; 271, or 12·25 per cent. between 10 and 15 years; 352, or 15·92 per cent. between 15 and 20 years; and 73, or 3·30 per cent. of the total number invalided over 20 years' service.

During the first year of service 326 men, equal to 14·73 of the total number invalided, were discharged as medically unfit for service. Among the chief causes of invaliding in this period were, heart disease 77 cases, epilepsy 40, mental disease 38, and phthisis pulmonalis 27.

The approximate average strength of men under one year's service being 19,420, the rate of invaliding for cardiac diseases in that period is found to be 3·96 per 1,000, which is only slightly higher than the similar rate for all periods of service, 3·79 per 1,000. The rate of invaliding for epilepsy in the first year of service was 2·06 per 1,000, considerably higher than that for the whole period of service, 1·12 per 1,000. Mental diseases gave an invaliding rate of 1·95 per 1,000 in the first year of service; this, also, is markedly greater than the total invaliding rate for these affections, 1·02 per 1,000. Phthisis pulmonalis, on the other hand, shows a rate of invaliding of 1·39 per 1,000 in the first year, considerably lower than that for the whole period of service, 3·79 per 1,000.

United Kingdom.

The admissions, deaths, and average number constantly sick in the various military districts are shown in the following Table:—

Military Districts.	Average Annual Strength.	Admitted into Hospital.	Died.	Average Number constantly Sick.	Ratio per 1,000 of Mean Strength.			Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
					Admitted.	Died.	Constantly Sick.		
1. Northern -	8,163	7,661	67	421·29	938·5	8·21	51·61	18·84	20·07
2. Eastern - -	4,318	3,806	27	181·73	881·4	6·25	42·08	15·36	17·43
3. Western - -	4,871	3,637	30	234·55	746·7	6·16	48·15	17·58	23·54
4. Southern - -	6,760	6,432	67	403·33	951·5	9·91	59·66	25·00	26·28
5. Chatham - -	4,103	3,750	25	198·76	914·0	6·09	48·44	17·68	19·35
6. South-eastern -	5,995	5,347	36	285·18	891·9	6·01	47·56	17·32	19·87
7. Home - -	6,916	5,656	47	312·24	817·8	6·79	45·15	16·48	20·14
8. Woolwich -	4,550	2,559	23	177·85	562·4	5·06	39·09	14·27	25·37
9. Aldershot -	10,642	9,162	65	594·93	860·9	6·10	55·91	20·40	23·76
10. North British -	3,238	2,742	17	128·42	846·8	5·25	39·66	14·44	16·49
11. Channel Islands	1,274	1,150	5	59·82	902·7	3·92	46·95	17·14	18·99
12. Belfast - -	3,002	2,127	22	109·75	708·5	7·33	36·56	13·34	18·83
13. Dublin - -	13,381	13,365	101	695·61	998·8	7·55	51·98	18·97	19·00
14. Cork - -	9,634	6,614	50	238·58	686·5	5·19	29·95	10·96	15·93
Detached from the Corps.	3,228	—	43	—	—	13·26	—	—	—
Total - -	90,075	74,008	625	4,092·04	852·2	*6·94	47·12	17·20	20·18
Average of 10 years 1872–81	—	—	—	—	824·5	7·83	41·04	14·98	18 17

* Calculated on strength, including men detached (3,228).

From the foregoing table it will be seen that the highest admission rate, 998·8 per 1,000, occurred in the Dublin district, and the lowest, 562·4 per 1,000, in the Woolwich district. The rate of mortality was highest in the Southern district, being 9·91 per 1,000, and lowest in the Channel Islands, being 3·92 per 1,000. The constantly sick rate was also highest in the Southern district 59·66 per 1,000, but was lowest, 29·95 per 1,000, in the Cork district. The average sick time to each soldier varies from 25·00 days in the Southern district to 10·96 days in the Cork district; and the average duration of each case from 26·28 days in the Southern district to 15·93 days in that of Cork. It will be noticed that the highest rates of all kinds are found in the Southern district with the exception of that for admission; but it will be seen that this rate reaches 951·5 per 1,000, and is second to that of Dublin. Cork, on the other hand, shows low rates throughout.

United Kingdom.

The following table, compiled from the Principal Medical Officers' Returns shows the admissions, deaths, number of men invalided, and number constantly sick, from each arm of the service, with the ratios per 1,000 of the strength and the corresponding ratios for the previous 10 years :—

Arms of the Service.	Average Strength.	Admitted into Hospital.	Died.	Discharged as Invalids.	Average Number Constantly sick.	Annual Ratios per 1,000 of Strength.				Average of 10 Years 1872-81.			
						Admitted.	Died.	Invalided.	Constantly Sick.	Admitted.	Died.	Invalided	Constantly Sick.
Household Cavalry	1,107	808	7	32	49·01	729·9	6·32	28·91	44·27	634·7	5·31	16·77	29·84
Cavalry - -	9,057	7,781	66	221	447·38	859·1	7·29	24·40	49·40	888·3	6·21	32·74	41·70
Royal Artillery -	15,655	11,141	107	371	678·55	711·7	6·84	23·70	43·35	802·8	8·99	27·20	38·90
Royal Engineers -	2,820	1,614	23	42	83·98	572·3	8·16	14·89	29·78	*258·7	7·05	17·84	46·82
Foot Guards -	4,666	4,460	38	84	239·46	955·9	8·14	18·00	51·32	871·3	7·41	23·80	45·28
Infantry - -	40,628	37,653	269	1,099	2051·02	926·8	6·62	27·05	50·48	790·9	7·36	27·28	36·69
Regimental Depôts	8,870	7,016	84	280	382·45	913·0	9·69	32·30	44·11	881 3	12·08	44·22	49.31
Garrison Staff and Departments.	4,244	2,635	31	83	161·03	621·0	7·30	19·56	37·94	*289·4	8·78	14·57	†9·36

* For five years only. † For three years only.

As compared with the results for the previous year, an increase has occurred in the admission rates of the Household Cavalry, Royal Engineers, Foot Guards, and of the Garrison Staff and Departments, but a decrease is noticed in those of all other arms of the service.

An increase has occurred in the rates of mortality of the Household Cavalry, Cavalry, and Foot Guards, but in those of all other arms of the service a decrease is observed.

The rates of invaliding show a decrease on those of 1881 in the Cavalry, Royal Artillery, and Foot Guards, but an increase in the remaining arms of the service.

The most important of the health statistics of the various corps which served in the United Kingdom during the year are shown in Abstract XLIV.

Officers.—The average annual strength of officers as taken from the reports of Principal Medical Officers was 3,451, the attacks of illness 1,072, and the deaths 16, being in the respective annual ratios of 310·6 and 4·64 per 1,000. Among the attacks of illness were 126 of frebrile disease, six cases being due to scarlet fever, and 10 to enteric fever; 130 of constitutional affections, the various forms of rheumatism accounting for the majority of the cases. Among local diseases, digestive affections caused 175 attacks of illness, respiratory affections 102, and urinary diseases 58. Local injuries occurred in 177 cases.

The deaths were caused as follows:—Enteric fever 2 cases, valve disease of heart 2, bronchitis 2, and phthisis pulmonalis, diabetes, pyæmia, aneurism of the aorta, 1 case respectively. There was also a death from accidental drowning, and 2 deaths occurred from gunshot wound, one of which was a case of suicide, and in the other case the coroner's jury returned a verdict of "found dead."

Women.—The average annual strength taken from the returns of Principal Medical Officers was 8,632, the number of attacks of illness, exclusive of parturition, 3,791, and of deaths 70, being in the respective annual ratios of 439·2 and 8·10 per 1,000. Among the attacks of febrile diseases were 10 of enteric fever, 9 of scarlet fever, 3 of small-pox, 1 of typhus fever, and 6 of puerperal fever. The deaths were caused as follows:—Phthisis pulmonalis 23 cases, respiratory affections 8, cardiac diseases 4, puerperal fever 3, hepatic diseases 6, debility 3, meningitis, paralysis, dysentery, peritonitis, and hæmorrhage, 2 cases respectively, and convulsions, gastritis, bronchitis, cancer, Bright's

United Kingdom.

disease, apoplexy, abortion, scarlet fever, and inflammation of the ovary, one case each.

Children.—The annual returns of Principal Medical Officers give the average strength of children as 16,125; the number of attacks of illness were 7,905, and of deaths 432, being in the annual ratios of 490·2 and 26·79 per 1,000 respectively.

Among the admissions were 1,846 cases of measles, 237 of scarlet fever, 6 of enteric fever, and 12 of diphtheria. The principal causes of death were bronchitis 71 cases, convulsions 55, measles 27, diarrhœa 26, tabes mesenterica 17, scarlet fever 18, debility 16, meningitis 14, whooping cough 11, diphtheria 6, and enteric fever 2 cases.

VACCINATION.

United Kingdom.

The following table shows the condition as to vaccination of all recruits found fit for the service during the year, both those inspected by Army Medical Officers only, and those who, having been primarily inspected and found fit by Civil Medical Practitioners, were approved, on secondary inspection, by Medical Officers. The total number of recruits thus found fit, 26,221, includes 92 who were discharged within three months of their enlistment, as unlikely to make efficient soldiers, under the provisions of section XIX., para. 255*g*, Queen's Regulations. The actual number of recruits finally approved was therefore 26,129.

The proportions per 1,000 of each condition is also shown in the table.

	Number of Recruits found fit for the Service.	Proportion per 1,000.
Had marks of vaccination - -	24,332	928·0
Had marks of small-pox - -	654	24·9
Had neither marks of small-pox or vaccination - - - -	1,235	47·1
Total - -	26,2 21	1000·0

As compared with the results for the previous year, an increase of 10·2 per 1,000 is observed among recruits bearing marks of vaccination, and a corresponding decrease among those who had marks of small-pox, the proportion of those who had neither marks of small-pox or vaccination remaining the same as before.

The following table compiled from the annual returns shows the number of soldiers vaccinated during the year, with the proportions per 1,000 of successful or modified vaccinations and failures when vaccinated with fresh or preserved lymph:—

Results.	Vaccinated during the period.					
	Arm to arm.		From Preserved Lymph.		Total.	
	Primary Vaccination.	Re-vaccination.	Primary Vaccination.	Re-vaccination.	Primary Vaccination.	Re-vaccination.
A perfect vaccine pustule.	129	3,447	256	4,272	385	7,719
A modified vaccine pustule.	61	2,750	219	3,983	280	6,733
A failure -	5	989	166	4,041	171	5,030
Total - -	195	7,186	641	12,296	836	19,482

United Kingdom.

Results.	Proportions per 1,000.					
	Arm to arm.		From Preserved Lymph.		Total.	
	Primary Vaccination.	Re-vaccination.	Primary Vaccination.	Re-vaccination.	Primary Vaccination.	Re-vaccination.
A perfect vaccine pustule.	661·5	479·6	399·4	347·4	460·5	396·2
A modified vaccine pustule.	312·8	382·8	341·6	323·9	334·9	345·6
A failure -	25·7	137·6	259·0	328·7	204·6	258·2
Total - -	1000·0	1000·0	1000·0	1000·0	1000·0	1000·0

As compared with the results for the previous year in arm to arm primary vaccination, an increase of 50·2 per 1,000 has occurred in the proportion of modified vaccine pustules, and a decrease of 25·4 and 24·8 per 1,000 respectively in the proportions of perfect vaccine pustules and of failures. In arm to arm re-vaccination also, an increase has taken place in the proportion of modified vaccine pustules amounting to 80·0 per 1,000, and a decrease in those of perfect vaccine pustules and failures amounting to 49·4 and 29·5 per 1,000 respectively.

In primary vaccination from preserved lymph an increase of 26·0 per 1,000 is noticed in the proportion of perfect vaccine pustules, and one of 58·1 per 1,000 in that of modified vaccine pustules; these, however, are counterbalanced by a decrease of 84·1 per 1,000 in the proportion of failures. In re-vaccination from preserved lymph a decrease of 26·7 per 1,000 in the proportion of perfect vaccine pustules is noticed, but an increase of 2·0 per 1,000 in the proportion of modified vaccine pustules, and one of 24·7 per 1,000 in that of failures.

In the total results of primary vaccination an increase has occurred in the proportion of modified vaccine pustules amounting to 59·0 per 1,000, but a decrease is noticed in that of perfect vaccine pustules of 27·7 per 1,000, and in that of failures of 31·3 per 1,000.

In the total results of re-vaccination a decrease of 30·2 per 1,000 in the proportion of perfect vaccine vesicles is counterbalanced by a similar increase in that of modified vaccine pustules, the proportion of failures remaining the same as in the previous year.

By primary vaccination is understood the first vaccination of individuals on whom the operation has never previously been successfully performed.

Women.—One successful case of primary vaccination, and 54 cases of re-vaccination are returned, the results of the latter being perfect in 21 instances, modified in 20, and failure in 13, or in the proportions of 388·9, 370·4, and 240·7 per 1,000 respectively.

Children.—2,454 children were primarily vaccinated, 2,252 cases being successful and 202 failures, being in the proportions of 917·7 and 82·3 per 1,000. Out of 1,318 arm to arm primary vaccinations, 1,260 were successful and 58 were failures, and of 1,136 primary vaccinations with preserved lymph, 992 were successful and 144 failures. Re-vaccination was performed on 133 children with successful results in 115 cases, or 864·6 per 1,000, and failures in 18 cases or 135·4 per 1,000. Out of 42 arm to arm re-vaccinations 40 were successful and 2 cases failed, and of 91 preserved lymph re-vaccinations 75 cases succeeded and 16 failed.

Small-pox.—Among men there were 14 cases and one death in the United Kingdom; in India there were 44 cases and 4 deaths, and in the colonies two cases and no deaths. Three cases occurred among women in the United Kingdom, 11 in India, and none in the colonies. There was no death. Among children one case, which recovered, is returned in the United Kingdom, 9 cases and 1 death in India, and one case in the colonies. The numbers are, therefore, men 62 attacks, 5 deaths; women 14 attacks, no deaths; and children 11 attacks and one death; the total of the cases being 87, and of the deaths 6. *United Kingdom.*

The rates of attacks of small pox to strength during the year were among men ·35 per 1,000, among women 1·05 per 1,000, and among children ·45 per 1,000. It will be noticed that women appear far more liable to attack than men or children, this is in all probability chiefly due to neglect of re-vaccination.

United Kingdom.

On the Recruiting of the Army.

The number of recruits inspected during the year, as gathered from the Annual Returns, was 45,423; of which 26,129 were passed as fit for the service and 19,294 were rejected as unfit, being in the ratios of 575·24 and 424·76 per 1,000 respectively.

Out of the total number inspected 37,563 were examined by Army Medical Officers only, of these 21,222, or 564·97 per 1,000, were found fit for service, and 16,341, or 435·03 per 1,000, were rejected as unfit.

The remainder of the total number inspected, 7,860, were primarily examined by Civil Medical Practitioners, and 1,099, equal to 139·82 per 1,000, were then rejected by them, the rest being referred to Army Medical Officers for secondary inspection, with the result that 1,762 more men, equal to 224·17 per 1,000, were rejected, leaving 4,999, or 636·01 per 1,000, as approved.

To the total number of rejections thus obtained must be added the rejections of 92 recruits, equal to 2·02 per 1,000 of the total number inspected, who were found medically unfit for service within three months of their enlistment, according to Section XIX., paragraph 255*g*, Queen's Regulations and Orders for the Army.

As compared with the return for the previous year the total proportion of rejections is less by 7·79 per 1,000, the total proportion of men passed fit being consequently greater by the same amount.

The following table shows the number inspected, the number rejected, and the ratios per 1,000 examined :—

TABLE I.

Examined by	Number of Recruits Inspected.	Number Rejected				Total found fit for service.
		On Inspection.	On Secondary Inspection by Army Medical Officers.	Unfit within three months of enlistment.	Total Rejected.	
Army Medical Officers -	37,563	16,341	—	92	19,294	26,129
Civil Medical Practitioners -	7,860	1,099	1,762			
Total - -	45,423	17,440	1,762	92	19,294	26,129

Examined by	Ratio of Rejections per 1,000 inspected.				Ratio of those found fit per 1,000 Inspected.
	On Inspection.	On Secondary Inspection by Army Medical Officers.	Unfit within three months of enlistment.	Total Rejected.	
Army Medical Officers - -	435·03	—	2·02	424·76	575·24
Civil Medical Practitioners -	139·82	224·17			
Total - -	383·94	224·17	2·02	424·76	575·24

The proportion of rejections by Army Medical Officers exceeds that for the previous year by 12·37 per 1,000, while the proportion of rejections by Civil Medical Practitioners at primary inspection is less by 76·59 per 1,000.

The native countries of recruits, the ratios of rejections, and the proportion per 1,000 furnished by each country are given in the following table:— *United Kingdom.*

TABLE II.

Native Countries of Recruits.	Examined by Army Medical Officers.		Primarily Examined by Civil Medical Practitioners.		Rejected on Secondary Inspection.	Unfit within three months of enlistment.	Total.		Proportion Rejected per 1,000 Inspected.	Proportion per 1,000 Recruits furnished by each Country.
	Inspected.	Rejected.	Inspected.	Rejected.			Primarily Inspected.	Rejected at Primary and Secondary Inspections and as unfit within three months of enlistment.		
England and Wales	27,764	13,102	5,706	807	1,272	56	33,470	14,237	425·37	737
Scotland - -	3,686	1,518	1,113	84	287	2	4,799	1,891	394·04	106
Ireland - -	5,605	2,524	967	182	196	14	6,572	2,916	443·70	145
British Colonies and Foreign Countries -	508	197	49	1	7	—	557	205	368·04	12
Not stated -	—	—	25	25	—	20	25	45	—	—
Total -	37,563	16,341	7,860	1,099	1,762	92	45,423	19,294	424·76	1,000

As compared with the results for the previous year, the ratio of rejections of recruits born in England and Wales is lower by 3·6 per 1,000, of those born in Scotland by 51·6, of those born in Ireland it is higher by ·7 per 1,000, and of those born in the British Colonies and Foreign countries lower by 10·4 per 1,000. The proportion of recruits born in England and Wales is higher than that for the preceding year by 8 per 1,000, of those born in Scotland by 18, and of those born in British Colonies and Foreign countries by 1 per 1,000, but of those born in Ireland the proportion is lower by 27 per 1,000.

The following table shows the number of recruits inspected for each arm of the service, the number rejected, the ratios of rejections, and the proportion for each arm of the service per 1,000 inspected.

TABLE III.

Arms of the Service.	Examined by Army Medical Officers.		Primarily Examined by Civil Medical Practitioners.			Unfit within three months of enlistment.	Total.		Ratio of Rejections per 1,000 of Recruits Inspected for each Arm of the Service.	Proportion per 1,000 Inspected for each Arm of the Service.
	Inspected.	Rejected.	Inspected.	Rejected at primary Inspection.	Rejected at secondary Inspection.		Inspected.	Rejected.		
Household Cavalry -	294	114	9	1	1	—	303	116	382·84	7
Cavalry of the Line -	3,680	1,423	236	33	59	2	3,916	1,517	387·38	86
Royal Artillery -	5,552	2,257	947	90	213	12	6,479	2,572	396·97	143
Royal Engineers -	889	366	110	12	20	2	999	400	400·40	22
Foot Guards - -	825	313	877	48	114	—	1,702	475	279·08	27
Infantry Regiments -	24,830	11,229	5,521	883	1,324	75	30,351	13,511	445·15	668
Departmental Corps	1,513	639	152	24	31	1	1,665	695	417·42	37
Not stated - -	—	—	8	8	—	—	8	8	—	—
Total - -	37,563	16,341	7,860	1,099	1,762	92	45,423	19,294	424·76	1,000

As compared with the results for the previous year, the proportion of rejections of recruits is lower for the Household Cavalry by 30·7 per 1,000 inspected, for the Cavalry of the Line by 34·0, for the Royal Artillery by 16·8, for the Engineers by 21·1, for the Foot Guards by 70·3, and for the Departmental Corps by 70·4 per 1,000, while for the Infantry regiments the proportion of rejections is higher by 7·1 per 1,000 inspected.

United Kingdom.

The proportion of recruits for each arm of the service per 1,000 inspected is higher than that in the preceding year for the Household Cavalry by 1, for the Cavalry of the Line by 29, for the Royal Artillery by 19, for the Royal Engineers by 4, for the Foot Guards by 14, and for the Departmental Corps by 18 per 1,000, but for the Infantry regiments the ratio of recruits is lower by 85 per 1,000 inspected.

The occupations of recruits before enlistment, the ratio rejected per 1,000 inspected in each group of occupations, and the proportion of each group in 1,000 recruits inspected are shown in the subjoined table:—

TABLE IV.

Occupations of Recruits.	Number Inspected.	Number Rejected.	Ratio rejected per 1,000 Inspected.	Proportion of each Group in 1,000 recruits Inspected.
1. Labourers, Servants, Husbandmen, &c.	27,020	11,416	422·50	595
2. Manufacturing Artisans (as Clothworkers, Weavers, Lace Makers, &c.).	6,280	2,944	468·79	138
3. Mechanics employed in Occupations favourable to physical development (as Smiths, Carpenters, Masons, &c.).	7,230	3,096	428·21	159
4. Shopmen and Clerks - -	3,039	1,378	453·43	67
5. Professional Occupations, Students, &c.	578	178	307·96	13
6. Boys under 17 years of age -	1,253	231	184·36	28
Not stated - - - -	23	51	—	—
Total - - -	45,423	19,294	424·76	1,000

As compared with the results for the previous year the proportion of rejections is higher in class 2, manufacturing artisans, by 29·1 per 1,000, in class 4, shopmen and clerks, by ·5, in class 5, professional occupations, by 7·3, and in class 6, boys under 17 years of age, by 7·2 per 1,000. The proportion of rejections in class 1, labourers, &c., is lower by 14·6 per 1,000, and in class 3, mechanics, &c., by 16·0 per 1,000.

In 1,000 recruits inspected, as compared with the results for the preceding year, the proportion of artisans is higher by 21, of shopmen and clerks by 11, of professional occupations by 5, of boys under 17 years of age by 5, and of mechanics by 4 per 1,000. A decrease of 45 per 1,000 is observed in the proportion of labourers.

The next table shows the state of education in 44,260 of the recruits inspected; no information on this point is available for the remainder (1,163) of the total number inspected.

TABLE V.

	Numbers Inspected.	Proportion per 1,000.
Well educated - - - -	3,391	76·6
Able to read and write - - -	30,259	683·7
Able to read only - - - -	4,499	101·6
Unable to read - - - -	6,111	138·1
Total - - - -	44,260	1,000·0

As compared with the state of education of recruits in the previous year we find, taking together those well educated and those able to read and write, that there is an increase of 23·9 per 1,000, in those able to read only a decrease of 15·0 per 1,000, and in those unable to read a decrease of 8·6 per 1,000.

Table No. 6, shows the number of recruits rejected in 1882, with the causes of rejection arranged in classes, and the ratio per 1,000 in each class. *United Kingdom.*

TABLE VI.

Causes of Rejections, in Classes.	Examined by Army Medical Officers.		Examined by Civil Medical Practitioners.				Unfit within first three months of service.	Total examined.	
	37,563		7,860					45,423	
	Number Rejected.	Ratio per 1,000 Rejected.	Number Rejected by Civil Medical Practitioners at Primary Inspection.	Ratio per 1,000 Rejected.	Number Rejected by Army Medical Officers at Secondary Inspection.	Ratio per 1,000 Rejected.		Total Number Rejected.	Ratio per 1,000 Rejected.
1. Syphilis	410	10·92	32	4·07	45	5·73	—	487	16·72
2. Scrofula	117	3·12	16	2·04	20	2·54	—	153	3·37
3. Phthisis	106	2·82	17	2·16	5	·64	—	128	2·82
4. Impaired Constitution	263	7·00	13	1·65	32	4·07	—	308	6·78
5. Other General Diseases	187	4·96	5	·64	27	3·43	—	219	4·82
6. Diseases of Nervous System.	30	·80	5	·64	11	1·40	5	51	1·12
7. Weakness of Intellect	56	1·49	2	·25	14	1·78	8	80	1·76
8. Defective Vision	1,357	36·13	102	12·98	147	18·70	—	1,606	35·36
9. Diseases of Eyes and Eyelids.	97	2·58	13	1·65	14	1·78	1	125	2·75
10. Diseases of Nose and Mouth.	21	·56	5	·64	2	·25	—	28	·62
11. Disease of Ears	23	·61	1	·13	4	·51	—	28	·62
12. Deafness	34	·91	3	·38	2	·25	2	41	·90
13. Impediment of Speech	53	1·41	3	·38	6	·76	—	62	1·36
14. Disease of Heart	774	20·61	87	11·07	70	8·91	7	938	20·65
15. Disease of Arteries (Aneurism).	9	·24	—	—	18	2·29	—	27	·59
16. Disease of Veins (Varix)	617	16·43	99	12·60	52	6·62	3	771	16·97
17. Disease of Lungs (except Phthisis).	81	2·16	11	1·40	9	1·15	1	102	2·25
18. Loss or Decay of many Teeth.	331	8·81	11	1·40	18	2·29	—	360	7·93
19. Hernia	295	7·85	63	8·01	25	3·18	—	383	8·43
20. Laxity of Abdominal Rings	72	1·92	5	·64	12	1·53	1	90	1·98
21. Hæmorrhoids	104	2·74	2	·25	15	1·91	1	122	2·69
22. Diseases of the Urinary Organs.	23	·61	6	·76	3	·38	1	33	·73
23. Varicocele	636	16·93	83	10·56	44	5·60	1	764	16·82
24. Other Diseases of the Genital Organs (not Syphilitic).	40	1·07	7	·89	13	1·65	—	60	1·32
25. Defects of Upper Extremities, from Fracture, Contraction, Luxation, &c.	229	6·10	15	1·91	29	3·69	4	277	6·10
26. Defects of Lower Extremities, from Fracture, Contraction, Luxation, &c.	429	11·42	55	7·00	51	6·49	4	539	11·87
27. Flat Feet	320	8·52	28	3·56	60	7·63	2	410	9·03
28. Diseases of Joints	136	3·62	2	·25	31	3·94	—	169	3·72
29. Other Affections of Bones and Muscles.	122	3·25	—	—	12	1·53	1	135	2·97
30. Ulcers, Wounds, and Cicatrices.	131	3·49	5	·64	16	2·04	—	152	3·35
31. Other Affections of the Cutaneous System.	123	3·28	20	2·54	23	2·93	—	166	3·65
32. Malformation of Ears	2	·05	—	—	1	·13	—	3	·07
33. Malformation of Nose and Mouth.	14	·37	—	—	—	—	—	14	·31
34. Malformation of Chest and Spine.	371	9·88	49	6·23	28	3·56	1	449	9·89
35. Malformation of Urinary or Genital Organs.	31	·83	1	·13	9	1·15	—	41	·90
36. Marks of Punishment, or of letter D. or B.C.	1	·03	—	—	—	—	—	1	·02
37. Under Height	1,208	32·16	30	3·82	118	15·01	4	1,360	29·94
38. Under Chest Measurement.	5,910	157·34	170	21·63	514	65·39	7	6,601	145·32
39. Under Weight (Muscular Tenuity and Debility).	969	25·80	111	14·13	155	19·72	2	1,237	27·23
40. Apparent Age not in accordance with General Order.	607	16·16	17	2·16	107	13·61	—	731	16·09
41. Not likely to become an efficient soldier.	—	—	—	—	—	—	36	36	·79
Not stated	2	·05	5	·64	—	—	—	7	·15
Total Rejected	16,541	435·02	1,099	139·82	1,762	224·17	92	19,294	424·76

United Kingdom.

The proportions of rejections from the various causes differ only slightly in each instance from those given in the returns for the previous year, except under the head of defective vision, in which a decrease of 11·33 per 1,000 is noticed, and of under chest measurement in which an increase of 21·95 is observed. The total difference for the year under report as compared with that preceding is a decrease of 7·79 per 1,000.

It will be observed that a cause of rejection, not likely to become an efficient soldier, has been inserted in the table, and that it refers to 36 men discharged in the first three months of service, returned as such. From the resources available it has not been possible in these instances to obtain retrospective information of the causes of rejections more definitely.

The proportion of rejections for defective chest measurement by Army Medical Officers was 157·34, and by Civil Practitioners only 21·63 per 1,000; of recruits under height Army Medical Officers rejected 32·16, and Civil Practitioners but 3·82 per 1,000; and of recruits whose apparent age was not in accordance with General Order, 16·16 per 1,000 were rejected by the former, and 2·16 by the latter. In other respects there is no very striking difference in the respective proportions of rejections from each cause by Army Medical Officers and Civil Medical Practitioners.

Ages, Heights, Weights, and Chest Measurements of Recruits.

The following table shows the ages of 43,622 recruits as given at their primary inspection, and the proportion of each age per 10,000. Information is not available for 1,801 recruits, the balance of the total number inspected, the returns from Civil Medical Practitioners not being complete.

TABLE VII.

Ages.	Numbers Inspected			Proportion in 10,000		
	By Army Medical Officers.	By Civil Medical Practitioners.	Total.	Inspected by Army Medical Officers.	Inspected by Civil Medical Practitioners.	Total.
Boys under 17 years	1,120	102	1,222	299	166	280
From 17 to 18 „	293	15	308	78	25	71
„ 18 to 19 „	1,561	58	1,619	416	95	371
„ 19 to 20 „	18,808	3,230	22,038	5,016	5,275	5,052
„ 20 to 21 „	5,045	938	5,983	1,345	1,531	1,371
„ 21 to 22 „	3,241	542	3,783	864	886	867
„ 22 to 23 „	2,554	460	3,014	681	751	691
„ 23 to 24 „	2,076	326	2,402	554	533	551
„ 24 to 25 „	2,177	395	2,572	581	645	590
25 years and upwards	624	57	681	166	93	156
Total -	37,499	6,123	43,622	10,000	10,000	10,000

The next table shows the heights of 43,508 recruits, taken at their primary inspection, and the proportion per 10,000 at each height. The heights of 1,915, the balance of the total number of recruits inspected is not given, owing partly to the incompleteness of returns from Civil Medical Practitioners, and partly to standards for measurement not having been supplied to certain stations.

TABLE VIII.

United Kingdom.

Heights.	Numbers Inspected			Proportion per 10,000		
	By Army Medical Officers.	By Civil Medical Practitioners.	Total.	Inspected by Army Medical Officers.	Inspected by Civil Medical Practitioners.	Total.
ft. in. ft. in.						
Under 5 3 -	1,081	96	1,177	288	157	271
5 3 to 5 4 -	1,876	106	1,982	502	173	456
5 4 to 5 5 -	7,677	1,253	8,930	2,055	2,047	2,052
5 5 to 5 6 -	8,076	1,333	9,409	2,161	2,178	2,162
5 6 to 5 7 -	6,783	1,237	8,020	1,815	2,021	1,843
5 7 to 5 8 -	5,026	902	5,928	1,345	1,474	1,363
5 8 to 5 9 -	3,376	627	4,003	904	1,025	920
5 9 to 5 10 -	1,963	345	2,308	524	564	530
5 10 to 5 11 -	854	145	999	227	237	230
5 11 to 6 0 -	399	48	447	105	78	103
6 0 and upwards	277	28	305	74	46	70
Total -	37,388	6,120	43,508	10,000	10,000	10,000

Table showing the weights of 37,326 recruits inspected by Medical Officers and the proportion per 10,000 at each weight. There is no information of this kind available respecting 7,860 recruits primarily inspected by Civil Medical Practitioners, and 237 recruits inspected by Army Medical Officers at certain stations at which the standard scales and weights had not been supplied.

TABLE IX.

Weights.	Numbers Weighed.	Proportion per 10,000.
Under 100 lbs. - - - -	956	256
100 lbs. to 110 lbs. - - - -	634	170
110 „ to 120 „ - - - -	4,806	1,288
120 „ to 130 „ - - - -	11,949	3,201
130 „ to 140 „ - - - -	10,926	2,927
140 „ to 150 „ - - - -	5,242	1,405
150 „ to 160 „ - - - -	1,972	528
160 „ to 170 „ - - - -	642	172
170 „ and upwards - - -	199	53
Total - - - -	37,326	10,000

Compared with the returns for the previous year an increase is observed of 12 recruits under 100 lbs. weight, of 7 from 100 lbs. to 110 lbs., and of 194 from 130 lbs. to 140 lbs. among 10,000 recruits whose weights have been recorded; a decrease is noticed of 52 recruits from 110 lbs. to 120 lbs., of 3 from 120 lbs. to 130 lbs., of 122 from 140 lbs. to 150 lbs., of 22 from 150 lbs. to 160 lbs., of 5 from 160 lbs. to 170 lbs., and of 9 of 170 lbs. and upwards among 10,000 recruits whose weights have been recorded.

United Kingdom.

The next table shows the chest measurement of 37,449 recruits inspected by Army Medical Officers, and the proportions per 10,000 at each chest measurement. There is no information of this kind available for 114 recruits inspected at certain stations by Army Medical Officers, or for those inspected by Civil Medical Practitioners.

In future years this information regarding recruits inspected by Civil Medical Practitioners will be given.

TABLE X.

Chest Measurement.	Numbers Measured.	Proportion per 10,000.
Under 31 inches - - - -	1,067	285
31 to 32 „ - - - -	766	205
32 „ 33 „ - - - -	3,036	811
33 „ 34 „ - - - -	8,861	2,366
34 „ 35 „ - - - -	13,932	3,720
35 and upwards - - - -	9,787	2,613
Total - - -	37,449	10,000

The above table is inserted for the first time, the information necessary to compile it not having been furnished in annual returns prior to the year under report. No comparison, therefore, with the chest measurements of previous years can be deduced.

In the following tables, Nos. 11, 12, and 13, are arranged in series according to age, the heights of 43,508 recruits inspected by Army Medical Officers and Civil Practitioners massed together, the several weights of 37,326 recruits inspected by Army Medical Officers, and the chest measurement of 37,449 recruits inspected by Army Medical Officers.

The proportion per 10,000 of each height, weight, and chest measurement at each age is also given.

TABLE XI.

Heights of Recruits on Inspection by Army Medical Officers, and on Primary Inspection by Civil Medical Practitioners.	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	Totals at each Height
ft. in. ft. in.											
Under 5 3 -	948	13	25	58	10	13	4	6	3	1	1,17
	82	5	—	6	2	—	—	—	1	—	
5 3 to 5 4 -	72	49	110	1,052	214	141	90	57	68	23	1,982
	12	2	4	56	12	7	5	3	4	1	
5 4 to 5 5 -	40	66	312	4,573	909	573	453	332	340	79	8,930
	6	2	9	745	186	86	95	60	58	6	
5 5 to 5 6 -	31	55	416	4,449	1,109	663	458	396	397	102	9,409
	1	1	16	775	212	104	81	59	75	9	
5 6 to 5 7 -	9	44	280	3,524	956	597	470	391	404	108	8,030
	—	2	8	651	183	129	88	83	82	11	
5 7 to 5 8 -	6	26	186	2,313	783	497	399	331	373	112	5,928
	1	—	9	466	140	83	69	50	75	9	
5 8 to 5 9 -	2	13	97	1,483	500	346	311	286	253	85	4,003
	—	1	7	297	101	62	63	43	43	10	
5 9 to 5 10 -	6	1	47	823	293	206	196	165	171	55	2,306
	—	2	3	148	64	45	32	18	30	3	
5 10 to 5 -	3	5	22	299	149	94	89	62	98	33	99
	—	—	2	59	24	14	15	6	18	7	
5 11 to 6 0 -	2	11	34	121	50	54	46	30	36	15	447
	—	—	—	18	6	8	5	1	9	1	
6 0 and upwards	—	10	29	67	54	44	27	15	22	9	305
	—	—	—	7	8	4	7	2	—	—	
Totals at each age and height	1,221	306	1,616	21,800	5,965	3,770	3,003	2,396	2,560	679	43,508

United Kingdom.

Heights of Recruits on Inspection by Army Medical Officers and on Primary Inspection by Civil Medical Practitioners.	Proportions per 10,000 of each Age at each Height.										Total Proportion per 10,000 at each Height.
	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	
ft. in. ft. in.											
Under 5 3 -	8,436	584	155	29	20	35	13	25	16	15	271
5 3 to 5 4 -	668	1,656	706	504	379	393	316	250	281	353	455
5 4 to 5 5 -	377	2,208	1,986	2,418	1,836	1,748	1,825	1,636	1,555	1,252	2,052
5 5 to 5 6 -	262	1,818	2,673	2,376	2,215	2,034	1,795	1,899	1,844	1,635	2,163
5 6 to 5 7 -	74	1,494	1,782	1,899	1,909	1,926	1,858	1,979	1,898	1,753	1,843
5 7 to 5 8 -	57	844	1,207	1,264	1,547	1,538	1,559	1,590	1,750	1,762	1,363
5 8 to 5 9 -	16	455	644	809	1,008	1,082	1,246	1,373	1,156	1,399	920
5 9 to 5 10 -	49	97	309	441	598	666	759	764	785	854	530
5 10 to 5 11 -	25	162	140	163	290	287	346	284	453	589	230
5 11 to 6 0 -	16	357	210	63	94	164	170	129	176	236	103
6 0 and upwards	—	325	179	34	104	127	113	71	86	132	70
Total -	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

Omitting boys, the highest proportion of recruits per 10,000 at any age and height is 2,673 at the age between 18 and 19 years, and at the height between 5 ft. 5 in. and 5 ft. 6 in., this proportion is lower by 551 than the similar highest proportion for the preceding year, the limits of age and height in each year being the same.

TABLE XII.

Weights of Recruits on Primary Inspection by Army Medical Officers.	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	Totals at each Weight
Under 100 lbs. -	901	19	11	13	4	6	1	—	1	—	956
100—110 lbs. -	122	50	89	273	51	17	13	11	6	2	634
110—120 „ -	66	93	427	3,064	500	235	163	128	96	34	4,806
120—130 „ -	14	63	523	7,444	1,483	814	574	442	462	130	11,949
130—140 „ -	10	41	320	5,535	1,664	1,069	815	639	643	190	10,926
140—150 „ -	1	7	110	1,802	871	662	593	511	537	148	5,242
150—160 „ -	2	10	46	463	321	292	206	232	271	69	1,972
160—170 „ -	1	9	21	108	90	99	93	79	105	37	642
Upwards of 170 lbs.	—	1	10	26	28	30	24	25	43	12	199
Totals at each age	1,117	293	1,557	18,728	5,012	3,224	2,542	2,067	2,164	622	37,326

Weights of Recruits on Primary Inspection by Army Medical Officers.	Proportions per 10,000 at each Age.										Total Proportion per 10,000 at each Weight.
	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	
Under 100 lbs. -	8,066	649	71	7	8	18	4	—	4	—	256
100—110 lbs. -	1,092	1,707	572	146	102	53	51	53	28	32	170
110—120 „ -	591	3,174	2,742	1,636	998	729	641	619	444	547	1,288
120—130 „ -	125	2,150	3,359	3,975	2,959	2,525	2,258	2,138	2,135	2,090	3,201
130—140 „ -	90	1,399	2,056	2,955	3,320	3,316	3,206	3,092	2,971	3,055	2,927
140—150 „ -	9	239	706	962	1,738	2,053	2,333	2,472	2,482	2,379	1,405
150—160 „ -	18	341	295	247	640	906	1,047	1,123	1,252	1,109	528
160—170 „ -	9	307	135	58	179	307	366	382	485	595	172
Upwards of 170 lbs.	—	34	64	14	56	93	94	121	199	193	53
Total	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

United Kingdom.

Omitting boys, the highest proportion of recruits per 10,000 at any age and weight is 3,975 among those at the age between 19 and 20 years, and at the weight between 120 and 130 lbs; this proportion is higher by 105 than the similar highest proportion for the previous year, the limits of age and weight in each year being the same.

TABLE XIII.

Chest Measurement of Recruits on Primary Inspection by Army Medical Officers.	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	Total at each Chest Measurement.
Under 31 inches -	950	31	12	41	4	25	1	2	—	1	1,067
31—32 inches -	100	43	62	393	78	37	32	15	5	1	766
32—33 „ -	45	70	284	1,833	370	158	118	79	56	23	3,036
33—34 „ -	16	88	684	5,233	1,096	654	429	324	260	75	8,861
34—35 „ -	6	42	387	7,740	1,963	1,210	916	742	719	207	13,932
Above 35 inches -	—	19	130	3,545	1,528	1,152	1,056	910	1,132	315	9,787
Totals at each age	1,117	293	1,559	18,787	5,039	3,236	2,552	2,072	2,172	622	37,449

Chest Measurement of Recruits on Primary Inspection by Army Medical Officers.	Proportions per 10,000 at each Age.										Total proportion per 10,000 at each Chest Measurement.
	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	
Under 31 inches -	8,505	1,058	77	22	8	77	4	10	—	16	285
31—32 inches -	895	1,468	398	209	155	115	125	72	23	16	205
32—33 „ -	403	2,389	1,822	976	734	488	462	381	258	370	811
33—34 „ -	143	3,004	4,387	2,786	2,175	2,021	1,681	1,564	1,197	1,206	2,366
34—35 „ -	54	1,433	2,482	4,120	3,896	3,739	3,590	3,581	3,310	3,328	3,720
Above 35 inches -	—	648	834	1,887	3,032	3,560	4,138	4,392	5,212	5,064	2,613
Total -	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

Omitting boys, the highest proportion of recruits per 10,000 at any age and chest measurement is 5,212 among recruits at the age between 24 and 25 years, and at the chest measurement above 35 inches. This being the first year in which this return furnished, no comparison with the results of previous years can be given.

On the Influence of Age on the Mortality of the Troops serving in the United Kingdom. *United Kingdom.*

The rates of mortality at different ages (arranged in quinquennial periods), in the several arms of the service, are shown in the following Table :—

Arms of the Service.	Annual Ratio of Deaths per 1,000 Living, at the following Ages :—					
	Under 20.	20 and under 25.	25 and under 30.	30 and under 35.	35 and under 40.	40 and upwards.
Household Cavalry - -	—	6·79	2·78	12·05	8·06	—
Cavalry - - -	·94	5·98	6·58	11·29	13·81	33·06
Royal Artillery - -	3·68	2·98	6·61	8·10	11·95	31·43
Royal Engineers - -	—	3·38	7·90	7·69	16·22	17·54
Foot Guards - - -	2·20	5·16	7·45	10·93	7·58	68·97
Infantry - - -	5·06	5·28	4·11	9·99	16·51	25·40
Regimental Depôts - -	1·69	5·07	7·99	10·22	11·42	32·41
Garrison, Staff, and Departmental Corps.	9·43	7·15	4·34	7·91	16·81	70·17
Average of all Troops at Home	3·86	5·06	5·69	9·59	13·96	31·31
Ditto ditto 1872–81	3·12	4·87	6·15	10·74	16·48	23·67
*Civil Male Population { England and Wales	6·89	8·67	9·55	10·37	11·96	13·96
*Civil Male Population { Healthy Districts -	5·83	7·80	7·93	8·36	8·96	9·86

* The ratio of mortality of males in the civil population under 20 has been calculated for the ages of 17–20, and that of 40 and upwards for the ages 40–45. The data for England and Wales have been obtained from Dr. Farr's English Life Table, published by authority of the Registrar General in 1864, and for Healthy Districts, from Dr. Farr's Healthy District Life Table, published in the 33rd Annual Report of the Registrar-General.

United Kingdom.

HOME STATIONS.

SANITARY CONDITIONS.

Northern District.

Deputy Surgeon General J. O'Nial, C.B., reports that, "the general health of "the troops has been fair. The daily sick from all causes was 5·16 per cent., "of which general diseases gave 2·88 and venereal diseases 2·28 per cent. "The Contagious Diseases Act was not in force at any station in the "district.

"*Barrack Accommodation.*—The cubic space has been up to regulation, "except in a few instances, temporarily, during the militia training.

"*Hospital Accommodation.*—In a district so very large as the northern the "hospital accommodation necessarily varies very much. In the recently-"constructed hospitals the accommodation is good and sufficient, but in the "older stations it is bad, notably so at Bradford, Sunderland, and Berwick-"on-Tweed. As it is quite impossible to bring the existing buildings at these "stations up to the conditions of modern requirements, completely new hos-"pitals have been asked for in the annual estimates, but have not been "sanctioned. Additional accommodation is required at Birmingham, "Coventry, Chester, Fleetwood, Salford, Newcastle, and Preston.

"*Warming.*—The warming of both barracks and hospitals is insuffi-"cient, and as the climate of this part of England is severe, this defect is "attended with much discomfort to the men. At first it was attributed to "over-ventilation and to an excessive amount of window space, but I am "inclined to think that at least in the case of the hospitals it is due to the "inefficiency of the means of warming adopted. The matter is at present under "investigation.

"*Ablution.*—The provision for ablution is in most cases good, and in all "sufficient.

"*Rations and Cooking.*—The rations have been good; the kitchens are "sufficient and the cooking varied.

"The following improvements have been carried out during the year:—

"At *Ashton.*—Reconstruction of urinal in hospital yard.

Birmingham and Coventry.—Slop sinks provided to married quarters.

"*Burnley.*—Iron ash-bin provided for hospital; water supply pipes renewed; "and barrack main drain ventilated.

"*Lancaster.*—Ventilation of cells improved and additional bath accommo-"dation provided.

"*Leicester.*—Urinal built for sergeants' mess.

"*Liverpool, North Fort.*—Latrines and urinals ventilated and iron ash-bin "provided.

"*Manchester, Hulme.*—Drainage of parade ground improved. Drain re-"paired and latrines reconstructed. New quarters provided.

"*Northampton.*—Hot and cold-water service provided to cook-house and "bath-rooms.

"*Preston.*—Filtering tank renewed and increased latrine accommodation "provided.

"*Warwick.*—Hot-water apparatus provided to hospital and guard-room."

Eastern District.

Deputy Surgeon General T. J. Murphy reports that, "the health of the "troops has been satisfactory. A large proportion of the admissions has been "due to pulmonary ailments, consequent on the cold east winds prevalent in "winter and spring in this part of England.

"The reports of medical officers on the condition of barracks and hospitals "have generally been favourable, but at Lincoln and Bury St. Edmunds the "barrack rooms are said to be very cold, and the regulated allowance of fuel

" has been found inadequate to produce a comfortable temperature in the " soldiers' quarters. Both barracks are new and of the design approved for " brigade depôts. A special report has been made of the defective warming " of the station hospital at Lincoln. The barracks at Lincoln, built on an " elevated plateau, exposed to the full force of cold easterly winds, do not in " their present state adequately protect the men occupying them. *United Kingdom.*

" At *Ipswich* accommodation for sick in excess of that now available is " urgently required (at last inspection every available bed was occupied), but " the necessary expenditure has not yet been authorised.

" No important sanitary improvements were made during the year, but the " following have been sanctioned :—

" *Ipswich Barracks.*—Reconstruction and improvement of underground drains.

" *Colchester, Artillery Barracks.*—Reconstruction of drainage of officers' " quarters.

" *Great Yarmouth.*—Reconstruction and improvement of drains.

" The gymnastic courses undergone at Colchester and Warley have been " beneficial to the health and vigour of the men."

Western District.

Deputy Surgeon General H. H. Reade, V.C., reports that the general health of the troops serving in the district during the year was satisfactory.

At Devonport the station hospital was reported by the medical officer in charge to need general refitting throughout the whole of the interior, its condition being such that workmen were constantly employed in repairs. Three rooms have been sanctioned for the treatment of sick officers, but were not yet properly equipped at the close of the year.

The sanitary condition of the barracks generally is reported to be satisfactory.

The Principal Medical Officer states that " at Newport, Monmouthshire, the " dry-earth system of conservancy does not work well; the latrines are most " objectionable and difficult to keep clean. I have recommended that water " be laid on and the latrines reconstructed.

" At *Brecon* the dry-earth system has been done away with and the latrines " converted into waterclosets. The drainage of the barracks has now been " completed.

" At *Pembroke Dock* the married quarters are not considered satisfactory, the " accommodation not being sufficient for comfort or health.

" At *Fort Hubberstone* a well inside the fort was closed, as the water was " found unfit for use; a new well has now been sunk outside the fort.

" At *Penally* great improvement has been effected in the men's latrines, as " they are now flushed by a plentiful supply of water from the new reservoir.

" At *Exeter* (*Topsham*) new officers' quarters and mess have been constructed " on the most approved sanitary principles. The accommodation in hospital " is considered to be barely sufficient, especially during the embodiment of the " militia. The infectious hospital is unprovided with watercloset, &c., or " ablution room. Representations on these and other sanitary requirements " have been made.

" At *Horfield* night urinals have been erected off each barrack room; a new " latrine for married people has also been constructed, and the erection of " another for the Royal Artillery is in contemplation. The medical officer in " charge draws attention to the defective drainage of the field used as a camping ground during the annual training of the militia, and attributes " numerous admissions to this cause.

" The infant school at Horfield Barracks does not afford sufficient accommodation for the number of children attending. I have recommended that a " larger room be appropriated, or if such be not available, that a new schoolroom be erected.

" At *Trowbridge* the night urinals are reported as defective from insufficient " ventilation, and the latrines unsatisfactory. The hospital needs a ward for " contagious diseases, and also a mortuary. With these exceptions the general " sanitation of the barracks is satisfactory and the health of the men good.

United Kingdom.

"At two stations only, Devonport and Pembroke Dock, are there gymnasia. "The training has been attended with marked improvement in the physique "of the men.

"During the period under review the dieting of the troops has undergone "no change; the rations have been, as a rule, good, and sufficient in quantity. "The warming and lighting in all the barracks has been reported to be satis- "factory."

Southern District.

Surgeon General J. Woolfryes, C.B., C.M.G., states that no insanitary conditions have affected the health of the troops in the district during the year under report. No epidemics took place, except one of measles, amongst children in Portsmouth garrison, the disease being very prevalent amongst the civil population at the time. He reports that "the cubic accommodation in "barracks and hospitals has remained as before. The ventilation of the "several buildings has been improved where required, with one exception, the "married quarters in the new barracks, Gosport, which have no ventilators "whatever. The facilities for ablution have been increased in some of the "barracks by the removal of the lavatory ranges from the centre of the room "to its sides; the means for variety in cooking have been strictly adhered to; "the boilers and steamers at Anglesea, Clarence, Point, Tipnor, Gosport "Barracks, Fort Gilkicker, and Parkhurst Barracks have been remedied. In the "recreation room at Dorchester a cooking range has been provided; also new "ovens at Gosport and Sandown. As regards soldiers' diets, there has been "for a short period the same issue as last year of 1 lb. of preserved beef once "a fortnight at Gosport and Portsmouth. There has been no alteration of the "soldiers' clothing. The surface drainage has been rendered effective where "required, and has been improved in Gosport Barracks and Station Hospital, "Portsmouth. Increased facilities for the escape of sewage have been effected "at Gun Wharf Barracks by the laying down of larger drain pipes. The "vicinities of barracks and hospitals in respect of drainage are satisfactory; "the defect complained of at Hilsea has now been remedied by the lowering "of main drain for some distance from its outlet to allow a better escape of "the sewage. At the Verne Citadel, Portland, new ash-bins have been pro- "vided. At the Station Hospital, Portsmouth, Jennings' waterclosets have "been provided in D house. At the hospital at Devizes double windows have "been placed at the east end of the large ward. An additional ward for the "accommodation of patients arriving in the Indian troopships has been pro- "vided at the female hospital at Portsmouth; and an additional entrance to "the two small wards of the infectious hospital, so as to prevent patients and "others being subjected to infection while passing through the larger wards "which led to them. The gymnastic training has had a marked good effect "upon the health of the troops, especially the recruits.

"The water supply has been good and abundant at all stations except Forts "Monckton and Rowner, and Parkhurst. At the latter place the water supply "is surface water from the forest collected in reservoirs and filtered, but it is "not good water, though the results of two analyses state it is fit for drink- "ing. More complaints have lately been made, and the water is again under- "going analysis.

"At Fort Monckton the drinking water is still obtained from a distance by "water cart; it has been decided to lay on the town water when funds are "available. At Fort Rowner the water is good, but the supply in summer "runs short."

Netley.

Surgeon General James L. Holloway reports that 2,083 foreign invalids were admitted into the Royal Victoria Hospital during the year, and that 409 remained from the previous year, making the total treated 2,492; out of these there were 28 deaths, 1,107 returned to duty, 943 were invalided, 4 transferred to lunatic

hospital, 79 to the Herbert Hospital, Woolwich, and 331 remained under treatment at the close of the year. *United Kingdom.*

The admissions do not include 1,697 who were admitted from the Egyptian Expeditionary Force.

The diminution of admissions, 1,053, as compared with those of the previous year, is due to the absence of invalids from Afghanistan and the decrease of admissions from South Africa consequent on the cessation of hostilities. This reduction is, however, amply compensated for by the admissions from the Egyptian Expedition.

"The sanitary arrangements for the hospital during the year were carefully attended to, and the drainage ventilation of the hospital and outbuildings are satisfactory.

"*Latrines.*—Additional latrine accommodation for the cottages occupied by the married men and their families has been provided, and to the women's latrines in the south wing 22 earth closets on the Mould system have been added; a similar addition is proposed to the north wing.

"*The Water Supply* has been augmented to a great extent, and should now, in case of fire, be ample.

"*Infection Ward.*—A detached building for the treatment of infectious diseases is still much required.

"*Heating.*—The question of providing better means of heating the corridor in the winter season is under consideration.

"*Hospital Kitchen.*—Two grills have been added for cooking chops and steaks. At first there was some difficulty in getting them to work properly, but that has now been removed.

"*Rations and Cooking.*—The rations have been of excellent quality and the cooking very good.

"*Railway Station.*—During the year the railway authorities have erected an extension platform, abutting on the Hound road, for the reception of invalids, which admits of quicker removal of the men to the hospital than has been the case hitherto.

"*Patient's Lift.*—The lift in the north wing has been put into working order, but is not quite satisfactory, being too small for a patient in the recumbent position.

"*Lunatic Hospital.*—The additional day room in the north-west airing ground, which has been annually recommended by the Commissioners in Lunacy in their reports, is still standing over for want of funds."

Chatham District.

Deputy Surgeon General W. G. N. Manley reports that "the general health of the troops in the district has been good, although the proportion of sick to strength is higher than last year.

"The accommodation in barracks has been sufficient, and there has been no overcrowding.

"The Gravesend Hospital has been reported on unfavourably for several years as unsuitable both in construction and position.

"The rations and water supply have been of good quality, but the supply of water at Chatham is described as limited.

"The clothing has been according to regulation, and is suitable.

"The sanitary condition of the various barracks and quarters is fairly satisfactory.

"The following sanitary services have been executed during the past year:

"*Brompton Barracks.*—Altering drain from ablution room, H house, to make it communicate with main drain.

"*Chatham Barracks.*—Improving floors of ablution rooms.

"*Fort Hoo.*—A separate cistern for water supply to watercloset.

"*Fort Pitt.*—A slop sink on 2nd Terrace casemates.

"*Wouldham.*—Erecting a shed for drying men's clothes at encamping ground.

United Kingdom.

"*Sheerness.*—Improvements in water supply and accommodation in quarters.
" In married quarters, Well Marsh, providing supply tank and service pipes.
"*Gravesend.*—Laying on fresh water to officers' quarters, Tilbury Fort.

South-Eastern District.

In his annual report Deputy Surgeon General W. Stewart states that "the " general health of the troops in this district during the year has been good. " The favourable admission and death rate, notwithstanding the arrival of a " number of delicate and sick men from Egypt, is in all probability attribu- " table to the generally mild seasons experienced.

" The following sanitary improvements were carried out during the year :—

" *Shorncliffe.*—Thirteen concrete huts have been erected, and are now " occupied.

" *Hythe.*—Canteen enlarged; also earth closets erected at Fort Sutherland.

" *Canterbury.*—Ventilation in cavalry guard-room improved. New canteen " erected in Royal Horse Artillery Barracks and quarters for the canteen " sergeant.

" *Brighton.*—Ventilation of stables improved; old brick drain replaced by " pipes.

" *Newhaven.*—Drainage of bath houses carried outside hospital.

"The general sanitary condition of the vicinities of barracks and hospitals " is reported satisfactory."

The Medical Officer in charge at Brighton calls attention to defects in the Station Hospital, and states that the site is objectionable, and also that it is faulty in construction. He urges the advisability of the erection of a new modern building outside the present boundary wall of the barrack and on a higher elevation.

From Canterbury it is reported that the general sanitary condition has been fair, but the prisoners' day room in connexion with the cavalry guard room is too small for the requirements.

At Dover the general health was good and sanitary conditions satisfactory. At the Castle an isolation ward is urgently required at the hospital; it appears to have been under consideration for some time. Certain other improvements are also required at the hospital, Western Heights.

At Shorncliffe the sanitary state of the barracks and huts and camp in general was satisfactory, the only exception being that the surface drainage in parts is not very good, the drains becoming, after heavy rains, blocked up with shingle; and in certain cases the married quarters are not entirely satisfactory.

Home District.

Deputy Surgeon General Sir James Hanbury, K.C.B., reports as follows :—

" After careful perusal of the reports of medical officers in the Home District, " I consider the sanitary condition of the barracks in the different stations " fairly good, and the health of the troops has not been injuriously affected by " any sanitary defects.

" The rations, cooking, water supply, ablution rooms, clothing, &c. have all " been satisfactorily reported on.

" During the winter months the supply of fuel for barrack rooms is insuffi- " cient.

" The accommodation provided for married soldiers is in some cases in- " sufficient; a family of four or five children are sometimes found to be " occupying one room, but it is right to add that the overcrowding has not " been frequent.

" The instructions and exercises carried out at the gymnasium are, I con- " sider, if done under careful supervision, calculated to improve the physical " development of young soldiers.

Woolwich Distrtct.

The Principal Medical Officer, Sir James Hanbury, K.C.B., remarks in a similar manner on the sanitary conditions of this district as he did on those of the Home District, noting particularly the insufficient accommodation provided for married soldiers in many instances, on this point he states, however, that representation has been made in many cases with satisfactory results.

Brigade Surgeon Wiles, in medical charge of the Herbert Hospital, draws attention to the want of married quarters for the men of the Army Hospital Corps employed there, and points out the hardship that, having no quarters, they should have to go a long distance to hire them, and then pay highly for wretched accommodation.

Surgeon-Major Burland, sanitary officer, Woolwich, reports favourably of the state of the garrison generally, and remarks that no faulty hygienic conditions inseparable from old buildings have been reported, with the exception of certain cesspits. On one occasion the state of the cesspits in the officers' back-yard, west wing, Royal Artillery Barracks, was represented to the Sanitary Committee with a view to early action in the matter. Two cesspits were found of about 70 feet in depth, with offensive matter up to within about 4 feet of the surface.

Aldershot Division.

Deputy Surgeon General James Ekin, M.B., C.B., reports that "the "sanitary condition of the barracks and huts has been fairly good. There has "not been any overcrowding and no recommendations have been necessary "with reference to it or to ventilation. The drainage and general sanitary "conditions of the vicinity of the barracks and huts have been fair.

"The Goux system of conservancy in the North Camp is not reported "favourably of, and it is to be hoped that it will be replaced before long by a "'Jennings,' or some other improved sanitary system; this subject has "been brought to the notice of the authorities.

"The condition of the latrines elsewhere, urinals, bath accommodation, the "means of cooking, &c. has been generally reported to be satisfactory. At "the Royal Military College an application has been made to have one of the "small wards fitted up as a bath room as it is much needed.

"There has been an unusual amount of enteric fever, more than for any "period during the last 20 years, nearly all the cases occurred between the end "of September and 29th December. There is only one instance on record "here of a similar kind, and that was in the quarter ending 25th September "1871, when there was about an equal number of admissions.

"In the quarter ending 29th December 1882, all the cases, with one ex-"ception, occurred in corps recently returned from Egypt; while in the quarter "ending September 1871, most of the disease was traced to some huts in the "South Camp; after diligent search it was found that the men of these huts "had been drinking water from a well forbidden for drinking or cooking pur-"poses. The use of this water was prevented and no further cases took place "that year.

"The following sanitary improvements have been effected during the year "or are in progress:—

"Urinals have been provided in the cleaning rooms, East Cavalry "Barracks.

"The soil pipes of the waterclosets, officers' quarters, Permanent Barracks, "have been disconnected by syphons from the main drains.

"Outside drainage with proper ventilation has been provided for carrying off "foul water, &c. from the ablution rooms in the East Cavalry Barracks.

"The old married quarters of the West Infantry Barracks have been en-"larged by converting every two rooms into one quarter.

"Latrine accommodation has been provided for certain schools in the North "Camp.

United Kingdom.

"In the Union Hospital a wash-house has been provided for the use of the "married families' Army Hospital Corps.

"A new boiler for additional heating has been provided in the Cambridge "Hospital.

"New bath rooms, with hot and cold supply of water, have been provided "for the Military Prison, North Camp.

"A portion of the water mains of the Permanent Barracks has been renewed "improving the water supply.

North British District.

The Principal Medical Officer, Brigade Surgeon S. A. Lithgow, M.D., reports that "the general health of the troops has been good throughout the "year. The accommodation and sanitary condition of the barracks, &c. have "been on the whole satisfactory.

"*Edinburgh Castle.*—Everything generally in as satisfactory a state as the "age of most of the buildings and their original construction will admit of. "At times the prisoners' room was insufficient for the numbers confined. The "shortness of the bathing accommodation was brought to notice, and the "matter is likely to receive attention.

"*Leith Fort.*—The ventilation in the recreation room and sergeants' mess "kitchen has been improved during the year, as has also the drainage into "Fort Street, the old pipes having been replaced by larger ones.

"*Glencorse.*—The Hepburn Barrack is the only one in use. A new barrack "for 130 men is approaching completion. A detached infection ward has "been finished, but it is still damp and requires the use of fires.

"At *Perth* the ventilation of the sergeants' mess and the women's wash-house "requires improvement. The Herbert stoves in the wards are reported to act "imperfectly.

"At *Fort George* the substitution of kerosine lamps for candles is strongly "recommended. The ventilation of the casemates is said to be defective.

"*Maryhill, Glasgow.*—The barracks are in a very satisfactory condition, but "the surface drainage of the barrack enclosure is defective. Unpleasant "smells have been noticed from the fossil burn, but this, though a standing "cause of complaint, appears to have exercised no unfavourable influence on "health. The training in the gymnasium here has been beneficial.

"At *Stirling* the sanitary condition is reported satisfactory. Improvement "in ventilation of guard-room was called for during the year.

"At *Ayr* the prisoners' room is reported to be unsuitable, dark and damp; "a plan is being prepared to remedy this. All else is in a satisfactory condition.

"*Hamilton.*—The prisoners' room is still insufficiently ventilated, although "two additional ventilators have been put up. The canteen roof is low, but is "about to be improved. The drain leading from the latrines in rear of the "block of staff-quarters requires improvement.

"*Blackness Castle.*—Although some conveniences that are usual in large "stations are wanting, still, considering the few men quartered here, the "buildings answer the purpose for which they are intended sufficiently "well."

Channel Islands.

The Senior Medical Officer, Brigade Surgeon R. W. Clifton, reports that "the health of the troops has been good throughout the Channel Islands during the past year. No special cause of disease has been reported by the medical officers in charge at the different station hospitals.

"The following improvements have been carried out during the year in "Jersey:—

"*Fort Regent.*—New ash-bin constructed. Iron bars furnished to windows "of wards.

"*Elizabeth Castle.*—Fence round gardens. Watercloset for stewards' "quarters. Foul linen store provided.

"*St. Peter's.*—Passage leading from wards to latrines enclosed the whole "length. *United Kingdom.*

"The following improvements are suggested:—

"Jennings' apparatus for lavatory, and stewards' store for hospital, Fort "Regent; and for St. Peter's, Jennings' apparatus for lavatory, water to be "laid on to mortuary, and boiler for heating water for baths.

"No alterations have been made in the scale of the soldiers' diet, but it has "been ample; the clothing of the troops in every way suitable; the drainage "of the hospitals and barracks of this Command is good and sufficient."

In Guernsey the medical officer in charge reports the general health as satisfactory, he states that the drainage appears good, but points out certain defects in some of the latrines and dry-earth closets; the ventilation in Prince's lines is said to be defective.

Belfast District.

The Principal Medical Officer, Deputy Surgeon General E. Franklyn, M.D., reports "that the troops and their families enjoyed very good health during the "year, except that there were many cases of infantile disease, due, in his "opinion, to the liability of children to colds in consequence of their living in "wooden huts so much in this district, he accordingly recommends the removal "of these huts as far as possible. He calls attention to the deficiency of bath "accommodation at Belfast, to the inconvenience of the hospital at "Enniskillen, on account of its distance and situation, and to the necessity "that arose for repairing the state of the drains at Newry, these were, how-"ever, attended to and were since reported satisfactory.

"At *Dundalk* the water supply was found to be impure; steps were at once "taken to remedy this.

"The alterations to old and erection of new buildings that were effected "during the year were—

"At *Armagh*, additional accommodation at officers' mess. Provision of "earth-closet to infectious ward at the hospital.

"At *Belfast*, erection of officers' and married soldiers' quarters. Renewal of "cooking range in provost sergeants' quarters.

"At *Dundalk*, renewal of cooking ranges in married soldiers' quarters, and "renewal and alteration of doors to officers' stables.

"At *Enniskillen*, renewal of Warren's cooking apparatus in men's cook-"house, and at the hospital an old pump removed and the useless well "covered over.

"At *Newry*, a wooden floor substituted for flagging in the guard-room; "improvement of latrines by erection of division wall."

Dublin District.

Surgeon-General J. Lamprey, M.D., reports that "although the troops in "this district were much scattered about in small detachments on protection "duty throughout the country, or crowded in barracks in the central "stations, they enjoyed on the whole a good state of health. Some cases of "enteric fever occurred among the troops at the Royal Barracks, Dublin, "which are old and were originally constructed on a faulty plan; their "position is objectionable, being too close to the River Liffey, and the drainage "does not appear to have been carefully planned in the first instance. Ven-"tilating shafts have been now applied to the main sewer; the old and disused "drains and cesspits of the original plan of construction have been filled in; "and dry areas have been constructed round most of the buildings.

"At *Castlebar* there was a serious outbreak of fever towards the close of the "year, since ascertained to be due to the well water being contaminated with "sewage; the ventilation of the barrack rooms was not properly attended to, "and there was considerable crowding. The ventilation has been improved "by placing perforated zinc in place of the upper pane of glass in the windows;

United Kingdom.

" the contaminated wells have been closed; and the crowding of the men's " rooms obviated.

" At the *Curragh* it is reported that during the summer months the bad smell " from the sewage farm, to the south of the camp, was complained of. It " appears that the sewage poured on the land is not sufficiently absorbed, and " bad smells, therefore, result. The subject is under consideration, but as " there is no fall for the fluid it seems difficult to find an outlet for its disposal.

" At *Portobello* a small ward has been constructed for an observation ward " for doubtful cases.

" At *Richmond Barracks*, owing to the occurrence of enteric fever, the water " supply was suspected, and eventually the use of canal water, which was " used hitherto, was discontinued and 'Vartry' water substituted; no further " case of fever occurred.

" At *Newbridge* improvements have been effected in the officers' waterclosets, " the drains from them in connexion with the main drain being placed out- " side the building instead of within as formerly.

" At *Birr* the coffee and grocery shops have been separated from the canteen " and moved nearer the reading-room; the change appears to work well.

" At *Galway* a new cistern for storing water has been built."

Cork District.

Deputy Surgeon General J. L. Jameson reports that " the general health of " the troops has been satisfactory. No insanitary causes appear to have affected " health except at Camden Fort, where the occurrence of bronchial and " catarrhal affections were due to leaky and draughty quarters, the huts being " old and in a very exposed situation. Repairs, however, have been put into " execution. The accommodation provided for the troops generally may be " considered very satisfactory, and the buildings in fair repair. Ventilation is " satisfactory in barracks permanently occupied, at some, small and recently " taken into use, it might be improved. Clothing has been suitable, and the " rations generally good. The water supply has been good and sufficient; in " some instances it is supplied by contract.

" Among defects noticed is the dampness of the walls of married quarters at " Cahir, and at Tipperary the end rooms of the new quarters are damp; " endeavours will be made to remedy these defects. The large turf fireplaces, " which are objected to as being unsuited for burning coal, have not yet been " replaced in some barracks by the modern coal grates. It is stated that the " new ventilating grates are being introduced as funds are being made " available. At Fermoy the medical officer reports the sanitary arrangements " in the town very defective, especially as regards drainage and water supply; " this has been brought to the notice of the Local Government Board. A " scheme for supplying water from the neighbouring hills has been approved " of, but very considerable delay has been shown in carrying it out.

" The following are the chief additions and sanitary improvements effected " during the year:—

" *Cork.*—A new building constructed, giving accommodation to sergeants' " mess, library, reading and recreation rooms. At the hospital additional " wards for cases of infectious disease provided.

" *Cahir.*—A pure and more ample supply of water introduced into " barracks.

" *Clonmel.*—Improvement of hospital drainage.

" *Fermoy.*—Improvement of drainage in old and new barracks.

" *Limerick.*—New married quarters to accommodate 24 families provided. " In the new barracks two men's wash-houses constructed. Drainage im- " proved at the officers and married quarters and recreation room.

" *Tralee.*—A pure supply of water introduced into barracks and hospital.

" *Castleisland.*—Improvement of drainage and water supply.

"*Carrick-on-Suir.*—Boilers and ovens in cook-house renovated. New pump erected. *United Kingdom.*

"*Killarney.*—Drainage improved. Accommodation increased by the construction of a hut.

"*Wexford.*—A supply of water from the Corporation Company's works introduced into barracks."

III.—ON THE HEALTH OF THE TROOPS SERVING IN THE MEDITERRANEAN.

Sickness and Mortality.

I.—Gibraltar.

Gibraltar.

The average strength of the garrison of Gibraltar for the year 1882 was 4,558 non-commissioned officers and men. The force was composed as follows:—the head-quarters 10th and 11th Brigades Royal Artillery, Royal Engineers, detachments Commissariat and Transport Corps, Ordnance Store Corps, and Army Hospital Corps were present throughout the year, but the remainder of the troops served for broken periods and arrived in, or left, the garrison on the under-mentioned dates. Arrivals—From England, 2nd Battalion Derbyshire Regiment on 2nd January, 1st Battalion North Lancashire Regiment and 2nd Battalion Essex Regiment on 13th July, 1st Battalion East Surrey Regiment on 6th August, and 2nd Battalion Durham Light Infantry on 14th August; from Malta, 3 Batteries 10th Brigade Royal Artillery on 30th March; from Halifax, 1st Company Royal Engineers on 4th August; and from Egypt, 18th Company Royal Engineers on 15th October. Departures—For India, 2nd Battalion Lincolnshire Regiment on 3rd January; for Malta, 3 Batteries 11th Brigade Royal Artillery on 31st March; and for Egypt, 10th Company Royal Engineers on 19th June, and 21st Company Royal Engineers on 31st July, 1st Battalion Berkshire Regiment on 8th July, 2nd Battalion Duke of Cornwall's Light Infantry on 14th July, 1st Battalion Cameron Highlanders on 7th August, and 2nd Battalion Derbyshire Regiment on 14th August.

The total number of admissions into hospital was 3,722, and the deaths (including that of an invalid who died after arrival at home) were 47. The average number constantly sick was 229·53, the average sick time to each soldier was 18·38 days, and the average duration of each case of sickness 22·51 days. The resulting annual rates per 1,000 are—admissions 816·6, deaths 10·31, and constantly sick 50·35. These rates show but slight differences in comparison with those of the previous year, with the exception of that of mortality in which there is an increase of 5·81 per 1,000; but as compared with the average for the past 10 years the admission, death, and constantly sick rates show an increase of 127·1, 3·78, and 10·99 per 1,000 respectively.

The more important of the health statistics of the corps which served in the garrison during the year will be found in Abstract XLV.

It will be observed that there was almost an entire change of the garrison in the course of the year, principally due to the expedition to Egypt. The four infantry regiments, composed of comparatively seasoned soldiers, being required for service in Egypt were replaced in the middle of summer by four unacclimatised regiments from England, consisting chiefly of very young soldiers. It is remarked that this undoubtedly increased the sick rate of the garrison, which was further influenced by the sick and weakly men of the corps sent to Egypt being left behind. The increase in the rate of mortality was mainly due to the number of fatal cases of enteric fever and of the deaths resulting from general and local injuries.

The admissions, deaths, invaliding, &c., in the various classes and orders of diseases will be found in Abstract II.

General Diseases.—The number of admissions for diseases of the *febrile group* was 920, and of deaths 23, being in the annual ratios of 201·8 and 5·04 per 1,000 respectively, which show an increase on the corresponding rates for the previous year of 33·3 and 3·91 per 1,000.

Eruptive fevers were only represented by seven cases of measles, but continued fevers caused 902 admissions and 22 deaths, nearly the whole of the sickness and mortality of this group. Of these, 40 cases are returned as

enteric fever, out of which there were 18 fatal cases, the ratio per 1,000 of admission being 8·8 and that of deaths 3·95. This mortality appears very high, but Brigade Surgeon Fuller, in charge Station Hospital, states that in his opinion many enteric cases of lesser severity, not being very well marked, were returned as simple continued fever, more especially as in many cases the symptoms of the local continued fever closely resemble enteric. With regard to the occurrence of this outbreak, the officer above-mentioned attributes it to deficient rainfall, as only 15 inches of rain were measured against 30, the average of the 10 previous years, and consequently there was not sufficient water to fill, or nearly fill, the reservoirs; the water in them, therefore, soon became low and contaminated with various sedimentary deposits. The Principal Medical Officer, Surgeon General Alexander Smith, however, points out that arrangements were so made that, in fact, the troops were very well supplied with good water from the Government rain-water tanks for drinking and cooking purposes, and for ablution and flushing with abundance of water from other sources. He states that "whatever influence the dryness "of the season may have exercised in producing fever, there is no evidence "that it did so through the use of bad water." The unusual prevalence of enteric fever was, in his opinion, mainly owing to the change which took place in the troops composing the garrison, when unacclimatised soldiers were substituted for more seasoned troops required for active service in Egypt; the younger men on first arrival suffered much from fever, which in many instances assumed the enteric form, with the high rate of mortality of that disease. Simple continued fever caused 861 admissions and 4 deaths, against 729 and 5 respectively in the preceding year, in the report for which this form of fever prevalent in Gibraltar was fully commented on. Ague caused only two admissions. Under other diseases of the febrile group we find that there were eight admissions for erysipelas, and one for pyæmia; the latter proved fatal. *Gibraltar.*

Diseases of the constitutional group.—The admissions for rheumatism numbered 155 or 34·0 per 1,000, which ratio is but little more than half that for the previous year; there were no deaths. The acute form furnished 17 cases, and the remainder included the chronic and muscular varieties, and one case of gonorrhœal rheumatism. A number of the cases of the chronic form were connected with a previous attack of fever.

Syphilis.—The admission rate for the primary form of this disease was 84·9, and for the secondary 12·9 per 1,000, the former being an increase of 16 per 1,000 on that for the previous year, and the latter a fractional decrease. The admission rate for all forms of venereal disease was 206·2 per 1,000, rather more than one fourth of the total rate for all diseases.

The constantly sick rate for primary and secondary syphilis was 7·74 and, combined with that resulting from gonorrhœa and its sequelæ reaches 14·58 per 1,000, which is slightly greater than in the preceding year. The Principal Medical Officer, with regard to the amount of inefficiency from venereal disease, speaks of the efforts that have been made to have the Contagious Diseases Act fully introduced into the town and garrison of Gibraltar, but fears that there is little prospect of the urgent representations which have been made being attended with good results.

The admissions for tubercular diseases number 24 and there were 6 deaths, giving the respective ratios of 5·3 and 1·31 per 1,000, rather higher than the rates for the previous year. The majority of the admissions and all the deaths were due to phthisis pulmonalis.

From other diseases of the constitutional group, there were two admissions, one for lupus and one for medullary cancer of the œsophagus, which proved fatal.

Local Diseases.—In comparison with those of the previous year, the differences in the admission rates of any of the orders of this class of diseases are very slight; a decrease in those of diseases of the circulatory and respiratory systems, and an increase in that of diseases of the urinary system alone, call for notice. Nervous diseases caused 25 admissions, of which 12 were due to epilepsy and 5 to mental disease. Diseases of the circulatory system caused 29 admissions, and 4 deaths which were due to valve disease of the heart in two cases, and in one each to aneurism of the aorta and syncope. There were many cases of inflammation of glands, especially inguinial; these are said to

Gibraltar. have occurred not infrequently in connexion with, or as a sequel to, the local fever. Respiratory diseases were chiefly due to bronchial affections; there were, however, 14 cases of pneumonia, of which two were fatal. The principal diseases of the digestive organs were tonsillitis, dyspepsia, dysentery, and diarrhœa, the two latter being most prevalent in September, October, and November; dysentery caused three deaths, and there was one from gastritis. The increase in the admission rate for urinary diseases is mainly due to the prevalence of gonorrhœa and its sequelæ above alluded to; other diseases of this order were few, but there was one death from Bright's disease.

Debility caused 23 admissions; the condition was generally induced by a previous attack of fever. Under the head of *poisons* are returned 10 cases of delirium tremens; no death occurred.

General Injuries.—Two fatal cases are returned, one from multiple injury—a sapper fell from a height of 50 feet, fractured his skull and leg, and dislocated the cervical vertebræ; the other was a case of asphyxia from the plugging of air passages.

Local injuries caused 349 admissions and 4 deaths, equal to annual rates of 76·6 and ·88 per 1,000 respectively. The admissions were from various causes, principally contusions, wounds, and sprains. The deaths were as follows: one resulted from fracture of base and vault of skull caused by falling from a ladder; another from dislocation of the spinal column; the remain- two cases were *suicides*, and were caused by gun-shot wounds of the head. There were also two attempts at suicide, one by gun-shot wound and the other by cut-throat. No motive could be ascertained in any of these cases.

Surgical operations.—None are recorded.

Invaliding.—The number of invalids sent home was 67, and of men finally discharged 44, equal to annual rates of 14·70 and 9·65 per 1,000 respectively, which are very little different from those of the preceding year, but in comparison with average rates of 10 years, they show a decrease amounting to 15·96 in the former case, and 5·95 in the latter. The principal causes of invaliding were fevers, phthisis pulmonalis, heart diseases, and mental affections; and of final discharge, diseases of the respiratory and circulatory systems, as well as phthisis pulmonalis.

Officers.—The average strength was 155; the attacks of illness were 93, and the deaths three. The principal causes of sickness were fevers; there were 3 attacks and 1 death from enteric fever, and 27 attacks of other fevers. In addition to that now mentioned there were two other deaths, both from phthisis pulmonalis. Eight officers were invalided during the year. The ratios of sickness, mortality, and invaliding are all higher than those in 1881.

Women.—The average strength was 283, the number of attacks of illness 134, of deaths 4, equal to annual ratios per 1,000 of 473·5 and 14·13 respectively, which are both in excess of the corresponding rates for the previous year. The principal diseases were fevers, and digestive and respiratory diseases. The deaths were caused by fever, phthisis pulmonalis, valve disease of heart, and syncope.

Children.—In an average strength of 530 children there were 435 cases of sickness and 28 deaths, which are in the respective annual ratios of 820·8 and 52·83 per 1,000, both greater than in the former year. Measles was very prevalent, 148 attacks are returned; bronchitis, diarrhœa, and fevers also caused a comparatively large amount of sickness. The deaths were caused by measles, 2 cases, continued fevers, 2, tubercular diseases, 3, nervous, 5, respiratory, 4, and digestive diseases, 6, debility, 3, and asphyxia, 1 (accidental).

Sanitary Conditions.—The Principal Medical Officer reports that "the " following are the principal sanitary improvements effected during the course " of the year.

"A disused tank at the side of the prisoners' room, which it rendered damp, " has been removed at Orange Bastion.

" Boarded floors have been provided for several rooms in Town Range Bar- " racks, also grates for most of the rooms in which these were deficient.

"The damp state of the walls of staff-sergeants' quarters at South Barracks " has been much improved. Stoves have been supplied to the new barracks " at Buena Vista, but wooden flooring is required for the basement floors.

" Wooden flooring and excellent grates provided for most of the barracks at " Windmill Hill.

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"A coal store has been provided for the Station Hospital. The construction of ceilings for the wards on the basement floor, and the repairs and renewal of some of the ward floors are being proceeded with.

"The drainage of the Hutments, Barracks and Hospital has been on the whole fairly satisfactory. The condition of some of the foreshores requires attention, and repairs are urgently necessary for the breakwaters at some of the sewer outfalls.

"The accommodation at the Station Hospital is insufficient for the wants of the garrison at the more unhealthy seasons of the year, and an effort is now being made to have a re-appropriation carried out, which would, at a trifling expense, give 46 extra beds.

"Increased means of flushing, trapping, and ventilating in connexion with the general town drainage are highly desirable in the interests of the health of the garrison generally. Increased means of storing water are also most requisite.

"There is an excellent gymnasium, and the effects of the training have been beneficial to the health of the soldiers."

II.—MALTA.

Malta.

The average annual strength of non-commissioned officers and men serving in Malta (with the exception of the Royal Malta Fencible Artillery) during the year 1882 was 4,619.

The troops composing the garrison were the head-quarters Royal Artillery, Royal Engineers, 1st Battalion Royal Scots, and detachments Commissariat and Transport Corps, Ordnance Store Corps, and Army Hospital Corps. These were present throughout the year, but the remainder served for broken periods, and arrived in or left the garrison as follows:—Arrivals—On the 3rd April, the 3rd Battalion King's Royal Rifles; 18th July, 3 batteries Royal Artillery, 1st Battalion Berkshire Regiment, and 2nd Battalion Duke of Cornwall's Light Infantry from Gibraltar; 1st August, 2nd Battalion Royal Munster Fusiliers, and 2nd Battalion Royal Sussex Regiment from England; 18th August, a wing of the 2nd Durham Light Infantry; 28th August, one battery Royal Artillery; 22nd September, 3 companies of Foot Guards; 20th September, 6 companies 1st Battalion Dorset Regiment, all from England, and 2 batteries Royal Artillery from Egypt on 13th October; and in addition to the above, drafts from various regiments from England on 24th January. Departures:—24th March, 3 batteries Royal Artillery for Gibraltar; 11th April, 4 companies Royal Scots for the West Indies, and a draft of 262 men for England; for Egypt on 8th July, 3rd Battalion King's Royal Rifles, 1st Battalion South Staffordshire Regiment, and 17th Company Royal Engineers; 20th July, 2nd Battalion Duke of Cornwall's Light Infantry; 20th July, 1st Battalion Royal Sussex Regiment; 23rd July, 1st Battalion Berkshire Regiment; 2nd August, 1st Battalion Gordon Highlanders; 9th August 1 battery Royal Artillery; 14th August, 2nd Battalion Manchester Regiment, and 31st August, 1 battery Royal Artillery; on the 2nd October, 2 companies Foot Guards left for England, and on the 3rd, 6 companies 1st Battalion Dorset Regiment, and 1 company Foot Guards.

The total number of admissions into hospital was 3,715, and of deaths, including those of three invalids, after arrival at home, 41. The average number constantly sick was 241·82. The annual rates per 1,000 derived from the foregoing are, admissions 804·3, deaths 8·88, and constantly sick 52·35. Compared with the corresponding rates for the previous year, a decrease is observed in all, amounting in admission rate to 100·1, in death rate to 2·54, and in that of constantly sick to 5·66 per 1,000; and in comparison with similar rates for the past 10 years the admission and death rates are less by 72·3 and ·79 per 1,000 respectively, but the rate of constantly sick is greater by 6·22 per 1,000.

The average sick time to each soldier was 19·11 days, and the average duration of sickness 23·76 days, the former being shorter than the corresponding period in the preceding year by 2·07 days, and the latter longer by ·35 days.

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Some of the more important of the health statistics of the corps which served in Malta during the year are shown in Abstract XLV.

The admission rates of the 2nd Battalion Royal Sussex Regiment and 2nd Battalion Royal Munster Fusiliers were very high, being 1,365·9 and 1,412·8 per 1,000 respectively. This is stated by the Principal Medical Officer, Surgeon General J. E. Clutterbuck, M.D., to have been due to the arrival of these regiments in the hot weather, and to their being mainly composed of young soldiers who expose themselves more than older men. The admission rates of the 1st Berkshire and 1st Dorset Regiments were also high, but these corps remained but a few days in the garrison, and the greater part of the admissions were due to venereal disease. The 1st Battalion Royal Sussex Regiment had the lowest admission rate, 485·8 per 1,000.

The highest rates of mortality were in the detachment Army Hospital Corps, and 2nd Battalion Royal Munster Fusiliers, being 41·65 and 21·44 per 1,000 respectively, and the lowest was in the 1st Battalion Royal Scots, 1·86 per 1,000.

The rate of invaliding varied from 66·66 per 1,000 in the 2nd Battalion Manchester Regiment to 15·46 in the 2nd Battalion Royal Sussex Regiment.

The admissions and deaths under each class and order of diseases are shown in Abstract No. III.

General Diseases.—*Febrile Group.*—The number of admissions under this head was 633, of deaths 14, of invalids sent home 16, and of constantly sick 43·43; the ratios per 1,000 for the foregoing are, therefore, admission 137·0, death 3·03, invaliding 3·46, and constantly sick 9·40. Comparing these with the corresponding rates for the previous year we find those for admissions, deaths, and constantly sick are lower by 65·0, 1·36, and 2·16 respectively, but the rate for invaliding home is higher by 3·24, which is a considerable increase; and in comparison with similar rates for the average of three years a decrease is noticed in all except that of invaliding.

Eruptive fevers caused but 12 admissions, or 2·6 per 1,000, a marked diminution on the previous year, when the rate was increased by an epidemic of dengue. The admissions were due in 11 instances to measles, all mild cases, and in one to chicken-pox.

Continued fevers show 594 admissions and 14 deaths equal to annual rates of 128·6 and 3·03 per 1,000, the former being 36·5 less than in the preceding year, but in the latter there is only a fractional decrease. Enteric fever caused 78 admissions and 13 deaths, simple continued fever 343 admissions and 1 death, and febricula 173 admissions.

The admissions for enteric fever were more numerous than in the previous year by 32, and the rate of prevalence 16·9 per 1,000 shows an increase of 6·8. The rate of mortality from this disease is almost the same as in 1881, the rate of mortality to attacks, therefore, in the year under report compares favourably with that in the former year, being 16·6 against 28·2 per cent. The disease was most prevalent in the Cottonera district, where there were 44 attacks and 8 deaths, next in Valletta, 27 attacks and 5 deaths, 5 attacks at Pembroke Camp, and 2 at Citta Vecchia. The Principal Medical Officer quotes a remark of Surgeon Major J. Duncan, in charge of Cottonera Hospital, with regard to the greater prevalence of enteric fever: "The increase is difficult to explain, "but since the year 1875 it has gradually increased, and the type of the "disease shows it to be more severe. This certainly is my opinion, especially "since Malta has been garrisoned by regiments composed of young soldiers "who are well known to be more liable to the disease than men of mature "age." The months of October and November were those in which the disease was most prevalent, but it was in July that the greatest number of cases proved fatal. It has not been possible to trace the disease to any definite cause or to any insanitary condition in the barracks themselves; great attention was paid to the sanitary surroundings, the water was carefully examined and found to be good, but it is stated that many of the taverns and grog shops used by the men are in bad sanitary condition, which might have had some effect in the production of disease. The great majority of the cases of simple continued fever and febricula occurred in the Cottonera district; this is attributed to the number of young soldiers quartered on that side, as well as to their arrival in the island in the middle of summer; one death occurred in Cottonera from simple continued fever complicated with dysentery.

Paroxysmal fevers.—These caused in all 20 admissions, of which 5 were cases of remittent fever; all of them did well. This compares very favourably with the previous year, when there were 69 admissions and 6 deaths from remittent fever. The admission rate, 4·3 per 1,000, is, therefore, less than that of 1881 by 12·4 per 1,000. The cases of ague occurred, for the most part, in men of the 3rd Battalion King's Royal Rifles, who arrived from South Africa; they were, however, mild and of short duration. *Malta.*

Constitutional group.—Caused 395 admissions and 6 deaths, and 48 men were invalided home. The annual ratios per 1,000 were, admissions 85·5, deaths 1·30, and invaliding 10·39; compared with the previous year there is a slight increase in the admission and invaliding rates, but a diminution in that of mortality, amounting to 1·99 per 1,000. Rheumatism caused 126 admissions, or at the rate of 27·3 per 1,000, a diminution of 10·5 on that of the previous year; there were no deaths, but 2·60 per 1,000 were invalided home. Of the total number of cases 42 are returned as acute rheumatism.

Syphilis.—The admissions for the primary form numbered 163, and for the secondary 54, equal to annual rates per 1,000 of 35·3 and 11·7 respectively; compared with the corresponding rates for the preceding year an increase of 12·0 per 1,000 on the former and 2·5 in the latter is noticed; the average constantly sick for these diseases was 3·91 in the year under report as compared with 3·03 in the former year.

Including gonorrhœa and its sequelæ, the admission rate for all forms of venereal disease was 140·8 per 1,000, which is an increase of 24·1 per 1,000 over that for the year 1881. The average constantly sick was 48·29 or 10·46 per 1,000 men as compared with 43·50 or 9·55 in the previous year, showing an increase of 4·79 or ·91 per 1,000.

The increase in the amount of venereal disease is said to have been due to the arrival of new regiments in the command, and the greatest number of admissions occurred in the month of August, after the landing of two regiments from England. The majority of the cases were mild and soon yielded to treatment.

Tubercular diseases were at the annual admission rate of 9·5 per 1,000, almost the same as in the preceding year. Of the 44 cases returned 42 were phthisis pulmonalis, 5 of these proved fatal, 2 in the command, 3 invalids after having left the island. Two cases of purpura occurred at Forrest Hospital, one of them, purpura hæmorrhagica, proved fatal.

Local Diseases.—Diseases of the nervous system caused 47 admissions, among which were two fatal cases of apoplexy, and one of abscess of the brain; this case was under treatment for polypus auri, when symptoms of brain affection set in; it proved fatal in about a week. Nine cases of mental affection were treated. Diseases of the circulatory system, 8·9 per 1,000, were 4·9 less than in the preceding year; the principal diseases were valve disease of heart and palpitation, and there was one sudden death out of hospital from aneurism of the aorta. Respiratory affections showed a decrease in admission rate of 14·7 per 1,000. Pneumonia caused 17 admissions and 5 deaths, pleurisy 16 admissions, and 1 death is returned from congestion of the lungs. There was a decrease of 8·6 per 1,000 in the admission rate for digestive disorders, the principal cases were tonsillitis, dyspepsia, diarrhœa, and dysentery; 4 deaths took place, 2 from dysentery, 1 from hepatitis, and 1 from abscess of the liver. Of a total of 64 cases of dysentery 30 occurred in Cottonera, 25 in Valletta, and the remainder at Pembroke Camp. The Medical Officer in charge at Cottonera remarks that this disease occurred chiefly among men of the 2nd Battalion Royal Sussex Regiment, and attributes this to the arrival of the regiment in the middle of the hot weather, as well as to the over indulgence in unripe fruit. Diseases of the urinary system show an increase of admission rate of 14·9 per 1,000, the greater part of which is due to the prevalence of gonorrhœa, particularly among the regiments which arrived from England during the year. Diseases of the generative system were less frequent than in the former year, and also diseases of the cellular tissue. In diseases of organs of locomotion, and the cutaneous system there was a slight increase, but no cases call for any special remark.

Debility caused 74 admissions, equal to an admission rate of 16·0 per 1,000, which is less than that for the previous year by 4·2; 18 men were invalided under this head.

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Poisons caused 40 admissions and 3 deaths, the admission rate being 8·7 and death rate ·65 per 1,000, the former being a decrease of 2·9 on that for the previous year. The cases were alcohol 34, and delirium tremens 6. One death is returned from alcohol, and 2 from delirium tremens, one of the latter cases was complicated with fracture and dislocation of the left ankle.

General Injuries.—A fatal case of multiple injury took place at Valletta; a man of the Royal Artillery, while asleep on a high parapet, rolled off, and sustained severe injuries to head, face, wrist, and spine. He died on the 24th day after the accident. A case of asphyxia by drowning occurred; a gunner, Royal Artillery, was accidentally drowned while bathing at Sliema.

Local Injuries caused 557 admissions and 2 deaths, the admission and death rates per 1,000 being 120·6 and ·43, the former being greater by 4·0 and the latter less by ·45 per 1,000 than the corresponding rate for the previous year. The principal injuries were contusions, wounds, sprains, fractures, &c. None demand special mention. The fatal cases were due to concussion of the brain and rupture of the spleen; the former occurred in a man of the 2nd Battalion Munster Regiment, who was accidentally ridden over whilst on picket duty at the Race Course, and the latter was caused by a fall from the top of the Station Hospital, Cottonera, a distance of 60 feet, and proved fatal in a few hours. One case of gunshot wound of the hand is returned. It occurred to a man of the 2nd Battalion Durham Light Infantry whilst on sentry. A court of inquiry was assembled, but could not determine whether the injury was accidental or intentional. No case of *suicide* or *self-inflicted injury* is returned.

Surgical operations.—The following minor operations were performed with satisfactory results:—fistula in ano, amputation of finger, and circumcision, of each two cases.

Invaliding.—The number of invalids sent home was 168, and of men finally discharged the service 93, or 36·37 and 20·13 per 1,000, the rates being greater than those for the preceding year by 8·04 in the former and 10·91 per 1,000 in the latter case, and than the average of similar rates for the past 10 years by 7·97 and 4·08 per 1,000 respectively. The principal causes of invaliding home were febrile diseases, rheumatism, tubercular diseases, debility, and diseases of the nervous, circulatory, respiratory, and digestive systems, and of final discharge the chief disabilities were tubercular diseases, diseases of the circulatory and respiratory systems, deafness, and debility.

Officers.—In an average annual strength of 163 officers there were 120 cases of illness and 3 deaths, and 12 were invalided home. The admission rate was 736·2 per 1,000 which is less than in the former year by 118·4 per 1,000.

The principal causes of illness were fevers and disorders of the digestive system. The rate of mortality was 18·40 per 1,000, and the deaths were caused by pulmonary consumption, one case, chronic laryngitis, one case, and the third case was due to concussion of the brain caused by the fall of a block on the officer's head while on board ship.

Women.—The average annual strength was 270, there were 198 cases of illness and one death, the rate per 1,000 for the former is 733·3 and the latter 3·70, they are lower than the corresponding rates for the previous year by 466·7 and 5·12 per 1,000 respectively. The prevailing diseases were fevers, tubercular diseases, respiratory diseases, and general debility. The death resulted from fracture of the skull caused by a fall down some stone steps. Five women were invalided for change of climate.

Children.—In an average annual strength of 468, there were 239 cases of sickness and 17 deaths, giving the respective rates per 1,000 of 510·6 and 36·32. Both rates are less than half those of the previous year. The prevailing diseases were fevers, diarrhœa, teething, bronchial affections, and debility. The deaths were chiefly due to meningitis, tabes mesenterica, convulsions, teething, diarrhœa, and debility.

Sanitary conditions.—The Principal Medical Officer remarks that "a comparison of the sick returns for this year with those of the preceding annual period shows that the general health of the troops in the command was an improvement on that of its predecessor," and "with the exception of an increase in the attacks of enteric fever and a few mild cases of measles there has been no epidemic disease during the period."

He states that "the accommodation in barracks was ample, and in hospitals *Malta.*
"sufficient, for although it was necessary to increase the number of beds on
"account of the sick arriving from Egypt, and the average cubic space was thus
"lessened, yet each patient was accommodated with more than the regulated
"amount of space. The water supply for drinking and culinary purposes was
"good and sufficient, but during summer the tanks supplying the Forrest
"station hospital and the Sanitarium, Citta Vecchia, ran short, and it was neces-
"sary to have water carried to them in carts. One large tank near the Forrest
"hospital was found to be extremely dirty, not having been attended to for
"years; it was therefore cleaned out, but during this process the hospital was
"closed for sanitary reasons, a temporary hospital being opened in some
"barrack rooms at Pembroke Camp."

The cooking and rations are said to have been satisfactory.

The sanitary condition of the latrines and urinals was carefully attended to, and there was a good supply of water for flushing as well as for ablution purposes. "There are no fire-places in any of the barrack rooms in the garrison, "but a fire-place should be erected in each, in order to dry and ventilate them "properly during the winter months, some being very damp during that season, "and productive of many of the rheumatic cases.

"The vicinity of some of the barracks and that of the Station Hospital, "Valletta, is not satisfactory, as they are surrounded by the dirty and densely "populated dwellings of the inhabitants, the latter is also situated in the "lowest part of Valletta, but a site for a new hospital was inserted in the "estimates for 1883–84."

In addition to the above the following items, among others, have been placed in the estimates for 1883–84:—An infection ward for the Station Hospital, Cottonera, which is much required. A new latrine and urinal to be erected outside the same hospital so as to diminish as much as possible the necessity of using those off the wards. At the Forrest Station Hospital, new pavement in front to replace the old, now completely worn out; a detached building for infectious cases; a fumigation room is also necessary, and special accommodation is needed for the men of the Army Hospital Corps.

"The following is a statement of the principal sanitary services which have been or will shortly be carried out.

"*Additional accommodation.*—A fumigation room to be provided at the Station Hospital, Cottonera; a verandah to the canteen, Ricasoli, has been provided; a new recreation room at Upper St. Elmo is in course of erection; the construction of a bathing place at St. Elmo for non-swimmers has been specially authorised, and sanitary alterations to No. 11 ward, Sanitarium, Citta Vecchia, have been completed.

"*Improvements in lighting and ventilation.*—The ventilation of the kitchen in Forrest Hospital has been improved; jalousies have been provided in officers' quarters at Citta Vecchia; the lighting and ventilation of the officers' stables at St. Elmo, Auberge de Castille, and Verdala barracks have been improved.

"*Water supply.*—Floriana barracks, the supply for flushing purposes has been increased; Zabbari Gate, renewal of force and lift pump; and at St. Elmo, Sallyport, provision of a force and lift pump, &c.

"*Lighting.*—Provision for a larger meter for 100 lights at Floriana barracks is in course of completion.

"*Latrine and ablution accommodation.*—Provision of force-pump to water-closet at the Garrison Library; provision of water supply for latrine at Right Flank Sallyport guard is also in progress.

"*Drainage.*—The entire re-modelling of the drainage of the officers' quarters, Floriana Barracks, also at the Salvatore Vittorioso, and St. Angelo Barracks have been carried out.

"*Warming and cooking.*—The renewal of Warren's cooking apparatus at Ricasoli, at Floriana Barracks, at Upper and Lower St. Elmo cook-houses has been completed, also the renewal of two boilers at St. Francis Barracks cook-house has been provided and completed.

"The following are the principal sanitary works that have been carried out in the towns of Malta:—

"1st. The drainage has been re-modelled in accordance with the most approved hygienic principles.

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" 2nd. All new houses are to be built under the direct supervision of the " Sanitary Department."

" 3rd. Reservoirs for rain water are in course of construction near Citta Vecchia to provide the houses with a supply of water in proportion to their increasing wants."

ROYAL MALTA FENCIBLE ARTILLERY.

The average annual strength of this corps was 317 non-commissioned officers and men; among these there were 192 admissions into hospital and 4 deaths. The average number constantly sick was 7·23, the average sick time to each soldier 8·32 days, and the average duration of each case of sickness was 13·74 days. The annual rates per 1,000 are, therefore, as follows:—Admissions, 605·7; deaths, 12·62; and constantly sick, 22·81. Compared with the corresponding rates of the previous year, we find a decrease of admission, and constantly sick rates of 39·6 and 2·45 respectively; the death rate, however, shows an increase of 3·90 per 1,000; and, in comparison with the average rates for the preceding 10 years, the decrease of admission rates is still more marked, being 91·2 per 1,000; the rate of mortality is greater by 6·20, but the constantly sick much about the same.

The admissions and deaths in the different classes and orders of diseases are found in Abstract IIIA.

GENERAL DISEASES.—The admissions under the *febrile group* of diseases numbered 33, being only about one third of the number admitted last year, when the rate was increased by the prevalence of dengue. No deaths have occurred in the year under report. The cases were—measles 1, febricula 20, all mild, ague 5, and remittent fever 7; the paroxysmal fever cases, with one exception, occurred amongst the detachment arriving from Egypt, where they had been exposed to malarial influences from the marshes in the vicinity of Damietta. In the constitutional group of diseases there were 21 admissions, due to a few cases of rheumatism, syphilis, anæmia, and phthisis pulmonalis, from which disease two deaths occurred.

LOCAL DISEASES.—The majority of the admissions under this class were due to diseases of the respiratory, digestive, and cutaneous systems, there is no great difference in the admission rates as compared with the preceding year, except in respiratory diseases, which show an admission rate of 113·6 per 1,000, being an increase of 72·9, which is due to the prevalence of bronchitis during the year. One death occurred from gangrene of the lung, and one from valve disease of the heart.

Invaliding.—The number of men discharged the service by invaliding was small, and the disabilities were phthisis pulmonalis one case, chronic bronchitis one, and debility three cases.

Officers.—The average annual strength was 20, and there were but seven cases of sickness; one death occurred from acute rheumatism.

Women and Children.—The general health was good in both, and there was no prevalence of any infectious disease among the families. One child died of croup.

Sanitary conditions.—The Medical Officer in charge, Surgeon L. Manché, M.D., states that " the barracks are, on the whole, fully equal to all sanitary re- " quirements, with the exception of the two rooms allotted to the detachment " of the corps quartered at St. Antonio's Gardens, which are still in a very ob- " jectionable state, both as to ventilation and watercloset accommodation." Referring to the rations he remarks " that they have been of good quality, " and there has been no change in the quantity," also that " much benefit has " been derived by the regiment from meat rations, the admissions into hospital " and the cases of invaliding for diseases due to deficient nourishment and " errors of diet are getting less every year; but a daily meat ration is the " desideratum, which will improve the physique of the men and greatly contri- " bute to their efficiency." The Principal Medical Officer states his concurrence in these remarks and recommends their favourable consideration.

The health of the detachment (120 strong) which was employed on active service in Egypt was, with the exception of a few cases of paroxysmal fevers and venereal disease, remarkably good throughout.

III.—Cyprus.

Cyprus.

The average annual strength of non-commissioned officers and men was 595. The composition of the garrison was as follows:—For the first seven months of the year, the right wing 1st Battalion Royal Sussex Regiment, detachments Royal Engineers, Commissariat and Transport Corps, Ordnance Store Corps, Army Hospital Corps, and other details averaged 497 non-commissioned officers and men. In the early part of August the garrison was increased by two companies Commissariat Corps, in September the depôts of regiments on active service in Egypt, both cavalry and infantry, arrived in the command, and the head-quarters Royal Sussex Regiment left for the seat of war in Egypt. After the cessation of hostilities in that country and before the end of October, all the depôts left the island, the garrison resumed its usual proportions, and consisted of a wing of the 1st Battalion Royal West Kent Regiment from Egypt, 50 men of the 31st Company Royal Engineers, and detachments of the departmental corps.

The total number of admissions into hospital was 609; there were 7 deaths, and the average number constantly sick was 27·90. The average sick time to each soldier was 17·11 days, and the average duration of each case of sickness was 14·72 days.

The annual admission rate per 1,000 was therefore 1023·6, the death rate 11·76, and that of constantly sick 46·89. Comparing these with the corresponding rates of the preceding year it will be seen that there is a marked increase in all, amounting in the case of admissions to 383·6, of deaths to 6·76, and of constantly sick to 16·29 per 1,000; but turning to the average rates for the three previous years it will be found that those of the year under review approximate very closely to them.

The falling off in the general health of the garrison during the year 1882, as evidenced by the above increased rates of sickness and mortality, appears to have been almost entirely due to certain obvious causes, which are enumerated by the Senior Medical Officer, Surgeon Major Falwasser, as follows:—

"1st. The great increase of the garrison at the hottest and most unhealthy "season of the year by the depôts of regiments engaged in the Egyption "expeditions.

"2nd. The arrival in the command of the Royal West Kent Regiment from "Egypt, after the termination of hostilities, in a most sickly and debilitated "condition.

"3rd. Intemperance and excessive indulgence in the use of native wines and "spirits both prior to and during the continuance of hostilities in Egypt; and "in connexion with this may be noted the excitement undergone by the men "in the uncertainty of their movements, followed by the disappointment "many of them experienced in not being sent to the front.

"4th. The preponderance during the greater portion of the year of very "young soldiers in the Royal Sussex Regiment.

"5th. The prevalence of certain diseases, probably due to defective "sanitation."

The distribution of the troops was as follows:—From the commencement of the year until June the head-quarter staff and one company of the Royal Sussex Regiment were quartered at Nikosia, a detachment Royal Engineers and Commissariat and Transport Corps at the Depôt, Limassol, and the head-quarters and right wing of the above regiment at Polymedia. The troops then occupied Troodos from about the 3rd June until the 6th October, after which period they returned to their former stations, a wing of the 1st Battalion Royal West Kent Regiment replacing the wing of the 1st Battalion Royal Sussex. As above stated, depôts of regiments serving in Egypt arrived in September, but remained only a short time.

It had been originally intended to utilise the island as a depôt for reserves for the Egyptian expedition, and to establish a large base hospital for the treatment of sick from the seat of war, but the rapid progress of the campaign and unexpected course of events prevented these plans being carried out in their full extent; the period of residence, therefore, of a large extra force in the island was of short duration, but, as the Senior Medical Officer remarks, "long enough to affect very considerably the annual health "statistics of the troops quartered in the island."

Cyprus.

The more important statistics of the health of the troops which served in the command are shown in Abstract XLV. Excluding the depôts of regiments which remained so short a time in the island, we find that the Royal Sussex Regiment had the highest admission rate, followed by the Royal Engineers and the departmental corps. In previous years the Royal Engineers have always shown the highest rate of sickness, but the infantry regiment headed the list in 1882, due, in the opinion of the Senior Medical Officer, to the "very large "proportion of young soldiers. These men came direct to Cyprus from "England the previous October, many of them were little over 20 years of "age, and the majority under 25 years."

The admissions and deaths in the different classes and orders of diseases are shown in Abstract No. IV.

General Diseases.—In the *febrile group* of diseases there was a considerable increase in prevalence; the admissions, 205 in number, give an admission rate of 344·5 per 1,000, being greater than that of the previous year by 204·5 per 1,000; 3 deaths, equal to 5·04 per 1,000, are returned under this head. Eruptive fevers were represented by a single case of measles, but continued fevers caused 97 admissions, of which 21 are shown as enteric fever, 56 as simple continued fever, and 20 as febricula. In the preceding year enteric fever was represented by two cases, and these were believed to have been contracted before arrival in the island. In the year under review 21 cases, equal to an admission rate of 35·3 per 1,000, an increase of 30·3, occurred, and there were three deaths. The first case occurred on 5th September at Troodos, in a man who had been resident there since June, and is believed to have been due to some local insanitary cause. The second case happened in a sergeant of the Royal West Kent Regiment, who contracted the disease in Egypt, and was transferred to hospital on arrival with his regiment on the 12th October. The succeeding 11 cases, with one exception, had a similar origin; all the men had served in Egypt, and had recently arrived from thence. The exception alluded to, the eighth case, occurred in a man of the Berkshire Depôt on the 18th October, there was diversity of opinion regarding its origin—whether it was due to some local source of infection at Polymedia or to the importation of the disease from Egypt. The remaining cases all occurred in the Royal West Kent Regiment, and though the dates of their admission to hospital were some time after the arrival of the regiment in Cyprus, there can be no doubt that all these attacks were the result of service during the campaign in Egypt.

The cases of simple continued fever occurred chiefly in the month of September at Polymedia among the men of the depôts, and the Senior Medical Officer remarks that "the vast majority of such attacks are induced by expo-"sure to the direct rays of the sun, and none are more prone to contract this "form of fever than those who have recently arrived from England." The cases of febricula were equally divided between Troodos and Polymedia. The rate of admission for paroxysmal fevers was 179·8 per 1,000, being an increase of 62·3 on the preceding year. Of the total number of admissions, 107, for these forms of fever, 55 were due to remittent fever and the remainder to ague. Nearly all the cases of the former occurred in the month of October, and the men of the Royal West Kent Regiment were the chief sufferers.

The rate of admission for diseases of the constitutional group was 110·9 per 1,000 which shows a diminution of 4·1 on the rate for the preceding year; and it is said that had it not been for the arrival of the depôts from England the decrease would have been considerably greater. The admissions were due to rheumatism and syphilis; the former shows 21 cases, of which 8 were of the acute form. There were no deaths; of the latter there were 29 cases of primary and 16 of secondary disease. With regard to these diseases, it is stated that up to the arrival of the depôts and other troops connected with the Egyptian Expedition, there had been very few admissions to hospital, but shortly afterwards many men of the reserves were found to be suffering from syphilis and other venereal affections, principally gonorrhœa.

Local Diseases.—An increase of admission rate is noticed in most of the orders of this class of diseases, especially in diseases of the eye and of the digestive and urinary systems. The eye affections were chiefly mild cases of conjunctivitis and tarsal ophthalmia, contracted in Egypt by men of the Royal West Kent Regiment, but were not numerous. Diseases of the nervous system include three cases of sunstroke, all of which did well. There were a

few cases of heart disease and one fatal case of long-standing aortic valvular disease. Respiratory diseases caused only 17 admissions, 3 being from pneumonia, all of which recovered. Diseases of the digestive system caused the admission of 109 cases, equal to an admission rate of 183·2 per 1,000, which is an increase of 98·2 on the rate for the previous year. The principal diseases were tonsillitis and ulceration of the gums, dyspepsia, dysentery, and diarrhœa. The tonsillitis and ulceration of the gums occurred at Troodos, and are said to have been of a diphtheritic nature and are ascribed by the medical officer in charge to local insanitary causes. The cases of dysentery numbered 22; the majority occurred among the men of the depôts at Polymedia, but a few happened at Troodos. One fatal case is returned from peritonitis. The man was admitted with intestinal obstruction, which, however, was relieved, but peritonitis supervened, and caused the fatal issue. Diseases of the urinary system were almost entirely due to gonorrhœa and its sequelæ, the prevalence of which has already been alluded to. No other local diseases call for special mention.

POISONS.—Under this head are returned two cases of alcoholic poisoning, both of which were fatal.

INJURIES.—*Local injuries* caused 45 admissions, of which two were simple fractures of the tibia; the remainder were wounds and contusions of no importance.

No case of *suicide* or *self-inflicted* injury is returned.

Surgical Operations.—None are recorded.

Invaliding.—The number of men invalided home during the year was 14, or at the rate of 23·52 per 1,000, which is greater than that of the former year by 11·02, but approximated closely to that of the three previous years. The causes of invaliding were, general debility four cases, remittent fever three cases, acute rheumatism and dysentery two cases respectively, and bronchitis, contusion, and enteric fever, one case each. Some of the above men were brought forward as invalids when their depôts left Cyprus, after the cessation of hostilities in Egypt, and it is probable that in some cases had they remained longer under treatment the necessity for invaliding would not have arisen.

Officers.—The average annual strength of officers was 37, and the attacks of illness 20, being at the rate of 540·5 per 1,000. There were no deaths. The attacks of illness happened chiefly among new comers to the island, who were exposed much to the sun in the course of their duties. A case of varicocele was successfully operated on. One case of fractured clavicle resulted from a fall from horseback.

Women and Children.—In an annual average strength of 16 women and 27 children, only two admissions are recorded among the former and one among the latter. The Senior Medical Officer remarks that there can be no doubt that Cyprus is admirably suited to children; catarrhal affections, the exanthemata, and other diseases incidental to juvenile life, are rare, and weak, strumous children not only recover, but thrive wonderfully in this climate.

Sanitary conditions.—Speaking of Nikosia, the Senior Medical Officer states "that the sanitary conditions are good, that this station is the healthiest in the "whole command, and recommends it as the most suitable spot in the island "for the erection of permanent barracks."

Troodos was not so healthy as in former years, and Surgeon Major Falwasser attributes this to the four consecutive years of occupation of the same site, together with the imperfect sanitation of that site in consequence of the difficulty attending the carrying out of the proper arrangements for conservancy as well as of the surface cleaning and removal of camp refuse; the disposal of the latter by burning, the only practicable method, is a difficult matter, but to facilitate this he proposes the erection of rough furnaces to be fed with fuel, of which an unlimited quantity is available.

The sanitation of Polymedia was fairly carried out at the commencement of the year, but during its occupation by the depôts a good many defects were noted connected with the surface cleaning and latrine management. The health at Polymedia was remarkably good until the arrival of the troops connected with the Egyptian Expedition. It may be mentioned that it was at this place that the base hospital for the Egyptian Expedition was established; the wooden huts were used for wards, and additional hospital accommodation was provided by marquees to the north of the present

Cyprus.

station hospital, and a large staff of medical officers, nurses, and hospital attendants were assembled. However, these arrangements were but little utilised, as on the 11th September the only batch of sick from Egypt, 68 men in number, arrived in the island; their stay was very limited, and did not exceed 17 days, but during that period 17 men were discharged to duty, and the remainder had progressed favourably.

The principal changes and improvements which were effected during the year are as follows:—

"1st. The waterworks long in progress at Polymedia have been completed, and that station is now supplied with an unlimited and excellent supply of excellent water.

"2nd. Huts at Nikosia and Polymedia have been roofed with French tiles, an excellent means of protection against both sun and rain.

"3rd. A new bakehouse and a new cookhouse have been constructed at the depôt, Limassol.

"4th. A cookhouse has been erected at Polymedia for the married families.

"5th. At Nikosia the officers' quarters have been painted both inside and out, and fitted with stoves.

"6th. The men's huts at the same station, the guard room, canteen, recreation room, and the married quarters have also been fitted with stoves.

"7th. A hospital lavatory and a mortuary have been erected at Polymedia."

IV.—ON THE HEALTH OF THE TROOPS SERVING IN THE DOMINION OF CANADA.

Sickness and Mortality.

Canada.

The force in this command was stationed at Halifax, Nova Scotia, and the average annual strength of non-commissioned officers and men was 1,892. The following corps composed the garrison:—Royal Artillery, the 6th, 7th, and 8th Batteries, 1st Brigade, Welsh Division; Royal Engineers, No. 1 Company, relieved by No. 10 Company, in July; and a detachment No. 4 Company; the 1st Battalion Yorkshire Regiment, the 1st Battalion Royal Munster Fusiliers, and detachments of the Commissariat and Transport, Ordnance Store, and Army Hospital Corps.

The admissions into hospital were 1,344, the deaths were 7, including that of an invalid who died after arrival at home. The average number of men constantly sick was 62·22. The resulting annual rates per 1,000 are—admission 710·4, death 3·70, and constantly sick 32·88 per 1,000. In comparison with the corresponding rates for the preceding year there is a decrease of 14·4 per 1,000 in the admission rate, of 2·89 in the death rate, and of 7·00 in that of constantly sick; but compared with the average rates for the previous 10 years we find that while there is an increase in the rate of admission of 38·6 per 1,000, the death rate shows a decrease of 2·81, the rate of constantly sick being about the same. The average sick time to each soldier was 12·00 days, and the average duration of each case of sickness 16·90 days, both of which are less than the corresponding periods in the previous year, the former by 2·59 and the latter by 3·19 days.

The most important of the health statistics of the different corps in garrison are shown in Abstract XLV. The 1st Battalion Royal Munster Fusiliers has an admission rate of 778·7 per 1,000, almost the same as in the former year, next the 1st Battalion Yorkshire Regiment, 724·9 per 1000, followed by the Royal Artillery and Royal Engineers.

The admissions and deaths in the various classes and orders of diseases are shown in Abstract V.

General Diseases.—The *febrile group* of diseases caused only 25 admissions equal to an annual rate of admission of 13·2 per 1,000, less even than that of the preceding year, which only reached 21·0 per 1,000. There were 3 admissions for measles and 2 for scarlet fever, all of which were mild cases. Continued fevers caused 15 simple cases; there was no enteric fever; ague shows 4 admissions.

The admission rate of the *constitutional group* of diseases was 175·5 per 1,000, a decrease of 15·1 per 1,000 on the year 1881. The various forms of rheumatism were rather prevalent, attributed to the "unprecedented severity "and length of the spring" and the prevailing high winds.

The admission rate for primary syphilis was 67·7 per 1,000, and for secondary syphilis 58·7, as compared with 103·1 and 36·5 per 1,000 respectively in the previous year. This shows a considerable decrease in primary attacks, though some increase in secondary cases; however, the admissions for all forms of venereal disease numbered 379, equal to an admission rate of 200·4 per 1,000, which, though still high, compares favourably with that of 1881, 249·3 per 1,000.

Tubercular diseases were less in number than in the previous year, only 11 cases being recorded. Two deaths, however, occurred, one in the command and one of an invalid.

Local Diseases.—Diseases of the eye caused 35 admissions, or 18·5 per 1,000, which is more than double the rate of the preceding year. Diseases of the circulatory system were much less prevalent, but two deaths occurred from fatty degeneration of the heart. Respiratory diseases gave an admission rate of 65·0 per 1,000, which is an increase of 21·2. This is probably due to the

Canada.

severe and prolonged winter. 43 admissions are shown from pneumonia and pleurisy, but there were no deaths. The increase in the rate of affections of the digestive system was also marked, being 44·3 per 1,000, or rather more than one third, and was due chiefly to tonsillitis, dyspepsia, and diarrhœa; a case of ulcer of the stomach and one of dysentery terminated fatally.

POISONS.—Four cases of delirium tremens and 42 of alcoholism were admitted during the year; one case of the former was fatal.

The Principal Medical Officer, Deputy Surgeon General W. Cattell, speaking of the prevalence of intemperance, remarks that "a large proportion of the "accidents, contusions, wounds, fractures, &c., as well as of the cases of "dyspepsia, are justly attributable to that, and estimates that nearly 200 "of the admissions resulted from it either directly or indirectly. He states "that proportionately there are more drinking shops in Halifax than in "London, and that liquor is very cheap."

INJURIES.—*Local injuries* caused 179 admissions, the great majority being contusions, wounds, and sprains. Six cases of fracture are returned, one of which, a fracture of the tibia and fibula of the right leg, was serious, but eventually made a good recovery.

No case of *suicide* or *self-inflicted injury* occurred.

Surgical operations.—None are recorded.

Invaliding.—The number of men invalided home during the year was 21, and of men finally discharged 46; the annual rates per 1,000 were therefore 11·10 and 24·31 respectively. In comparison with the similar rates for the previous year we find a decrease of 13·48 per 1,000 in that for men invalided home, and of 6·27 in that for men finally discharged. Compared with the average rates for 10 years there is also a decrease, amounting to 10·49 per 1,000 in the former and an increase amounting to 8·81 in the latter case. The causes of invaliding were chiefly diseases of the circulatory and respiratory systems, periostitis, rheumatism, phthisis pulmonalis, &c., and of the final discharge of men, tubercular diseases, eye affections, and diseases of the circulatory and urinary systems.

Officers.—The average annual strength was 99, out of which there were 31 cases of sickness, equal to a rate of 313·1 per 1,000. There was no death, but four officers were invalided, in one case on account of a serious fracture of the humerus with dislocation of the elbow.

Women.—In an average annual strength of 145 there were 70 cases of sickness and 1 death. The admission rate was 482·8 per 1,000. The death was caused by uterine phlebitis. The principal causes of admission were respiratory and digestive diseases, uterine affections and debility.

Children.—The average annual strength was 312, the admissions 125, and deaths 6, equal to annual rates per 1,000 of 400·6 and 19·23 respectively. Measles caused 41 admissions, scarlet fever 7, diphtheria 1, respiratory affections 23, digestive disorders 13, the remainder being from various causes. The deaths resulted from diarrhœa in 3 cases, and from scarlet fever, bronchitis, and asthma of each 1 case.

Sanitary conditions.—The Principal Medical Officer reports that "the health "of the troops has been good throughout the year, and no cases of sickness "from insanitary causes have been reported. The sanitary condition of the "several forts and barracks, married quarters, and hospital, has also been "satisfactory. Arrangements are being made for providing new quarters for "some of the non-commissioned officers in the Royal Artillery barracks, when "the objectionable old rooms will be re-adjusted. The Royal Artillery "prisoners' room requires increased ventilation, otherwise the lighting, "warming, and ventilation of the several quarters have been satisfactory. "The cooking has been good, and the rations unchanged.

"*Gymnasium.*—An unfavourable opinion as to the influence of the "course has been on various occasions put forth, but an analysis of this year's "results shows that no injury has occurred, and that, with the exception of "loss of weight in a few instances, increased muscular development has ensued.

"The following sanitary improvements, &c. have been effected during the "year:—

"South Barracks.—Provision of recreation room.

"Royal Artillery Park.—Alterations in drainage.

"Melville Island Prison.—Warder's quarters lath and plaster ceilings. *Canada.*
"Wellington Barracks.—Soldiers' latrines, soil pits reconstructed and water
" laid on for flushing.
"Royal Artillery Park.—Regimental guard room, sanitary improvements.
"Glacis Barracks.—Provision of new cook house. Re-modelling latrines.
"Queen's Yard.—Alteration to coxswain's quarters.
"Wellington Barracks.—Improvement of rain-water drainage. Magazine
" guard and lodge keeper's quarters provided with earth closets.
"Ives Point Battery.—Latrines, rebuilding of soil pits.
"Prince of Wales' Tower.—Provision of ashpit.
"Royal Engineer Yard.—Enlargement and improvement of quarters."

V.—ON THE HEALTH OF THE TROOPS SERVING IN BERMUDA.

Sickness and Mortality.

Bermuda.

The average annual strength of non-commissioned officers and men serving in Bermuda during the year was 1,446, and the corps composing the garrison were two batteries of Royal Artillery, four companies of Royal Engineers, the 2nd Battalion of the Royal Irish Rifles, detachments of the Commissariat and Transport Corps, Ordnance Store Corps, and Army Hospital Corps.

The only change in the composition of the garrison was the departure of the 28th Company Royal Engineers in February, on being relieved by the 4th Company from England.

There were 956 admissions into hospital and 13 deaths, including those of two invalids who died after arrival at home. The average number constantly sick was 47·79. The ratios per 1,000 of strength resulting from these figures are, admissions 661·1, deaths 8·99, and constantly sick 33·04. As compared with the corresponding rates for the previous year there is a decrease of 26·28 in the admission rate, but an increase of 2·63 in the death rate, and a fractional increase in that of constantly sick; and in comparison with the similar average rates for the preceding decennial period the rate of admission is greater by 27·3 and the rate of mortality by 1·31, while that of constantly sick is almost the same. The average sick time to each soldier was 12·06 days, and the average duration of each case of sickness 18·25 days, the former being longer by ·33 and the latter by 1·20 days than the corresponding periods in the preceding year.

The more important of the health statistics of the different corps are shown in Abstract XLV.

The health of all the corps was good; the highest admission rate occurred in the Royal Irish Rifles, but only reached 734·8 per 1,000, the death rate in this corps was small, being 2·47 per 1,000. The highest death rate was in the Royal Artillery, 20·30 per 1,000, due to the occurrence of four deaths out of the small average annual strength of 197. The admissions and deaths in the various classes and orders of disease are shown in Abstract VI.

General Diseases.—*Febrile* affections caused 94 admissions and two deaths, equal to annual rates of 65·0 and 1·39 per 1,000; which, in comparison with those of the previous year, show an increase of 18·6 in the former case and a decrease of ·52 in the latter. The increase of admission rate is owing to the occurrence of mild cases of continued fever. No case of eruptive fever is returned, but 91 cases are shown as continued fever, of these 21 were cases of enteric fever, of which two were fatal; 14 of the cases occurred at Prospect, five at St. George's, and two at Watford Island; it is difficult to trace the cause of these cases.

The Principal Medical Officer, Deputy Surgeon General J. Ogilvy, M.D., states that "the sanitary state of the barracks and camps cannot be appreciably "debited with the cases of enteric fever that have occurred. The dry-earth "system at Prospect is systematically carried out, and at St. George's there is "very efficient and regular forcible flushing by steam power of every latrine. "It is hoped that when all the cesspools used by civilians in the neigh-"bourhood of military buildings are closed the disease may decline."

A mild epidemic of dengue, introduced by ship, crept over the island in the autumn, but fell very lightly on the troops; the cases that occurred have been returned under the head of febricula. Three cases of ague are returned, and are said to have been contracted elsewhere.

The number of admissions from diseases of the *constitutional group* was 126, and there were three deaths, being in the annual rates of 87·1 and 2·08 per 1,000

respectively. The increase of admission rate over that for the foregoing year is 39·4 per 1,000, and is due to the great prevalence of syphilis. Rheumatism caused 31 admissions, giving a ratio of 21·4 per 1,000, about the same as that of the previous year, and slightly under the average. The admissions for primary syphilis were 68, and for secondary 10, equal to rates per 1,000 of 47·0 and 6·9, which are greater than the similar rates for the previous year by 30·5 and 3·7 per 1,000 respectively. Including all forms of venereal disease the admission rate was 78·8 per 1,000, this shows an increase of disease equal to 29·8 per 1,000. The Principal Medical Officer states that "this enormous increase is "due to the entire want of supervision and restriction and of any hospital ac- "commodation for the increasing number of prostitutes." The need for active and timely interference has been very forcibly represented to the government of the island.

There were 16 admissions and three deaths from tubercular disease, which shows a rate of admission more than double that of the former year. Two of the deaths took place from phthisis pulmonalis and one from tubercular meningitis.

LOCAL DISEASES.—Diseases of the nervous system furnished five admissions, three of which were for mental disease; there were two deaths, one from apoplexy, and one from abscess of brain. Diseases of the circulatory system show an increase of admission rate over that of 1881, chiefly due to cases of palpitation. Respiratory affections were less numerous, bronchitis being the chief cause of admission, and from which one death resulted. Digestive disorders show a decrease of 27·6 per 1,000; the admissions were principally from dyspepsia and diarrhœa. One death occurred from peritonitis. Urinary diseases were chiefly due to gonorrhœa. It is curious that cases of this disease were fewer in number than usual, while syphilis was so much more prevalent. Diseases of the cellular tissue and cutaneous affections were considerably lower than the average.

Debility caused an admission rate of 21·4 per 1,000, 5·1 higher than the average. It is said that this may be due to long continued effect of climate, as with one exception no relief took place in the year under review.

Poisons.—Six cases of alcoholic poisoning and six of delirium tremens are returned, with one death from the latter. The Principal Medical Officer states that "there is still a great deal of drinking among the troops, but it is "decreasing, and care is taken to divert the minds of the men and encourage "the use of milder beverages."

INJURIES.—Under the head of *general injuries* one death occurred from drowning. A corporal of the Royal Engineers was "found drowned" in Hamilton Harbour, he had been missing for some days and was supposed to have accidentally fallen into the water. *Local injuries* caused 194 admissions or 134·2 per 1,000, wounds, contusions, sprains, and blistered feet chiefly. The work on the fortifications, moving guns, and cutting the feet on the sharp rocks in bathing explain the prevalence of these injuries. One death resulted from fracture of the skull, the man, a gunner, having fallen into one of the deep moats at Fort Cunningham. A death returned as "cause unknown," was that of a gunner who escaped from hospital and after six days was "found dead" (coroner's verdict) on the beach at St. George's.

No case of *suicide* or *self-inflicted* injury is returned.

Surgical Operations.—None are recorded.

Invaliding.—The number of men invalided during the year was 23, and of men finally discharged 11; the annual rates per 1,000 are therefore 15·91 and 7·60. In comparison with the corresponding rates for the previous year a decrease of 8·92 per 1,000 is observed in the former and an increase of 3·84 in the latter; but as compared with the average similar rates for the previous 10 years a decrease is noticed in both, amounting to 3·90 and 5·43 per 1,000 respectively. The principal causes of invaliding were rheumatism three cases, phthisis pulmonalis five, heart diseases three, dementia two, impaired vision, lupus, pneumonia, Bright's disease, &c., one each. The causes of final discharge were chiefly rheumatism, phthisis pulmonalis, and diseases of the circulatory, respiratory, and urinary systems, &c.

Officers.—In an average annual strength of 67 officers there were 39 cases of sickness, equal to a rate of 582·1 per 1,000, but little less than in the preceding year. The causes of admission were various. Two officers died, one from

Bermuda.

heart disease and one from spinal fracture resulting from a fall. None were invalided.

Women.—The average annual strength was 105, and the number of cases of sickness was 48. There was one death. The admission rate was 457·1, a considerable increase on the rate for 1881. Fevers, debility, and uterine disorders were the chief causes of admission; the death resulted from rheumatic fever.

Children.—Fifty-two cases of sickness occurred in an average annual strength of 208, or at the rate of 250 per 1,000, the increase in this case amounts to 73 per 1,000. The chief causes of admission were whooping cough, bronchitis, and diarrhœa. The deaths, five in number, were caused by meningitis, cyanosis, pneumonia, whooping cough, and diarrhœa.

Sanitary Conditions.—The Principal Medical Officer reports that the general "health of the troops has been good. The barracks and hospitals are located "in high, dry, well-ventilated ground, and the sanitary surroundings are un- "exceptionable, except at St. George's, where the town lies close to the "barracks.

"There have been no sanitary defects to which can be traced the dengue and "enteric cases; great pains have been taken to investigate these, but they are "in no way traceable to insanitation.

"Some few suggestions tending to the health and comfort of the troops have "been made and attended to.

"Means of ablution, variety in cooking, improvement in diet by substituting "preserved meat for the salt pork ration, effective drainage, and cleanly sur- "roundings have been well attended to.

"The town of St. George's has somewhat improved since last report, but "still requires great sanitary measures for the due preservation of health; it "has been placed out of bounds to the troops during an epidemic of "diphtheria.

"The clothing worn is suitable to the climate."

VI.—ON THE HEALTH OF THE TROOPS SERVING IN THE WEST INDIES.

Sickness and Mortality.

I.—White Troops.

West Indies Command.

The average annual strength of non-commissioned officers and men was 492. The troops in the Command consisted of the 5th Battery, 1st Brigade, Cinque Ports Division Royal Artillery at Jamaica; the 6th Battery of the same Brigade, which landed at Barbados on the 13th December from the hired transport "Bolivar," wrecked off the east coast of that island; the left wing 1st Battalion Royal Lancaster Regiment at Jamaica from 1st January to 22nd May, when it left for England, having been relieved by the left wing 1st Battalion Royal Scots; detachments Royal Engineers, Army Hospital Corps; the Garrison Staff, and the sergeants of the West India Regiments. The stations occupied by white troops were Jamaica, Trinidad, and Barbados.

The number of admissions into hospital was 332, there were five deaths, and the average number constantly sick was 18·34. The annual rates per 1,000 are therefore, admissions 674·8, deaths 10·16, and constantly sick 37·28. In comparison with the corresponding rates for the previous year a decrease is noticed in all, amounting to 384·2 per 1,000 in admission rate, to 51·15 in death rate, and 3·14 in that of constantly sick.

The great decrease in admission rate, and especially in the rate of mortality, was chiefly due to the immunity from yellow fever in the year under review, which disease had been epidemic in Barbados in 1881.

Still even in comparison with the similar average rates for the preceding 10 years a decrease is observed in all of them, being 263·0, 5·23, and 5·82 respectively.

The average sick time to each soldier was 13·61 days, and the average duration of each case of sickness 20·16, the former shows a decrease of 1·15 and the latter an increase of 6·23 days.

The most important of the health statistics of the various corps are shown in Abstract XLV., and the admissions and deaths in the different classes and orders of disease in Abstract VII.

General Diseases.—The admissions from the febrile group numbered only 22, or 44·7 per 1,000, and there was but one death. The reduction in admission rate on the previous year is 303·1 per 1,000, and in rate of mortality 57·06, the latter is due chiefly to the absence of yellow fever, and so also the former in great measure, but a great diminution in the attacks of continued and paroxysmal fevers has also to be taken into account. Enteric fever caused one death (a man admitted in the previous year) and one admission, which ended favourably; both cases occurred at Newcastle, Jamaica. Simple continued fevers caused only 11 admission, and paroxysmal fevers 10, of which 6 cases were remittent fever, as compared with 75 in the year 1881; there was no death.

In the *constitutional group* of diseases there was an admission rate of 115·8 per 1,000, which is in excess of that for the preceding year by 37·8, this is principally due to the relative increase of syphilis, the rate of prevalence for both forms of this disease being 83·3 per 1,000, which is an increase of 44·3. However, the annual admission rate for all forms of venereal disease, 144·3 per 1,000, is nearly identical with that of the year 1881, owing to a decrease in the admission rate for gonorrhœa and its sequelæ almost equal to the increase in that for syphilitic diseases.

Tubercular diseases caused six admissions, due to phthisis pulmonalis, and one death; all the cases occurred in Jamaica, one in Up Park Camp, and five at Newcastle, the climate of which is said to have been found, late in the year, very unsuitable for phthisical cases.

West Indies Command.

LOCAL DISEASES.—The admissions in this class of diseases have been generally few in number in all the orders; disorders of the digestive system show 72 admissions, but the comparative rate of prevalence is scarcely higher than in the former year; the principal causes of admission were dyspepsia, diarrhœa, and hepatic affections. Two deaths occurred from abscess of the liver, one at Jamaica and the other at Trinidad. Cutaneous diseases were not excessive, and were slightly less frequent than in the previous year.

The admissions for *debility* were much less frequent than in 1881, when a large number occurred as the result of the prevalence of fevers. *Poisons* caused three admissions, one case of delirium tremens and two of alcoholic poisoning, one of the latter proved fatal, this occurred at Jamaica. The admissions for *local injury* were comparatively rather numerous, but none call for special remark, except a case of gunshot wound, which happened at Trinidad, a marker at the rifle range was struck in the left eye by a splinter from a bullet, the accident is stated to have been due mainly to the man's carelessness; the sight of the eye was unfortunately destroyed. No case of *suicide* or *self-inflicted* injury is returned.

Surgical Operations.—None are recorded.

Invaliding.—The number of men invalided home was five, and of men finally discharged six, equal to the annual rates per 1,000 of 10·16 and 12·19 respectively. Compared with those of the preceding year, these rates show a respective decrease of 23·29 and 19·02 per 1,000, when invaliding was very high, owing to the prevalence of yellow and other fevers. The invaliding rates are, however, considerably lower than the average of those corresponding for the previous 10 years. The causes of invaliding were debility and heart disease; and of final discharge, diseases of the circulatory, nervous and respiratory systems, and debility.

Officers.—The average annual strength was 89 and the number of cases of sickness 46. There were two deaths, and invaliding was necessary in four instances. The annual admission rate 516·8, death rate 22·47, and the invaliding rate 44·94 per 1,000 are all greatly less than similar rates for the previous year. The principal causes of admission were fevers, phthisis pulmonalis, tonsillitis, dyspepsia, and debility. The deaths were caused by a case of apoplexy at Belize, Honduras, and by poisoning by chloroform (*suicide*) at Newcastle, Jamaica.

Women.—In an average annual strength of 50 there were 35 cases of sickness, equal to 700·0 per 1,000, slightly less than in the former year. The chief causes of illness were fevers, digestive and uterine disorders, and debility. There was no death.

Children.—The average annual strength was 90, the number of attacks of illness 16, and of deaths 3, equal to rates per 1,000 of 177·8 and 33·33 respectively, both less than in the former year. The chief causes of sickness were fevers, diseases of the nervous system, diarrhœa, &c. The deaths were due to anæmia, meningitis, and convulsions.

Sanitary Conditions.—The Senior Medical Officer, Surgeon-Major E. F. Boult, reports that "the health of the white troops in the West Indies has been good "and satisfactory during the past year, and there was no epidemic.

"The accommodation in barracks has been good, and in hospitals satisfactory, "with abundant cubic space and superficial area. Water supply ample, except "at Newcastle, Jamaica, where during very dry weather a scarcity is experi-"enced. Drainage and conservancy satisfactory."

The following sanitary improvements have been carried out:—

"*Barbados.*—Brick barracks. Officers' quarters. Earth closets and urinals erected in lieu of waterclosets; drain repaired under floor of closets.

"Station Hospital.—Disinfecting room provided.

"Medical Pavilion.—Defective drain taken out, two earth-closets fixed, and bath drains disconnected with drains.

"Brigade Cottage.—An additional room provided. At Queen's House, and several other quarters, new arrangements in drainage made, waterclosets removed and earth closets substituted."

II.—Black Troops.

West Indies Command.

The average annual strength of non-commissioned officers and men was 1,120, exclusive of white sergeants. The black troops serving in the Command were the left wing of the 1st West India Regiments at Demerara, the headquarters 2nd West India Regiment at Jamaica, with detachments at Barbados, Nassau, and Honduras, and the corps of military labourers at Barbados. The admissions to hospital were 1,152, the deaths 19, and constantly sick 66·61; the ratios per 1,000 of strength are, therefore, 1028·6, 16·96, and 59·47 respectively. Compared with the preceding year there is a decrease in the admission rate of 141·6 per 1,000 and a very slight increase in the rates of mortality and constantly sick; and in comparison with the corresponding average rates for the previous 10 years there is a decrease of 98·8 in that of admission and of ·53 in that of mortality, but the rate of constantly sick shows a slight increase. The average sick time to each soldier was 21·75 days, and the average duration of each case of sickness 21·15 days. The admissions and deaths in the different classes and orders of disease are shown in Abstract VIII.

The *febrile group* of diseases shows an admission rate of 144·6 per 1,000, which is less than half that for the preceding year, and is also considerably below the average. Continued fevers caused 33 admissions of a mild type; two cases of dengue occurred at Nassau. Of 127 cases of paroxysmal fevers recorded, 118 were due to ague, and the remaining 9 to remittent fever. Ague was most prevalent in Honduras, and caused also a good many admissions in Jamaica and Demerara. Five cases of remittent fever occurred in Honduras, three in Jamaica, and one, fatal, in Demerara. There was no admission for yellow fever among the troops anywhere in the Command, though at Demerara it was epidemic until July, but fortunately did not spread to the garrison.

In the *constitutional group* of diseases an increase in the prevalence of tubercular disease has taken place equal to 4·8 per 1,000. There were 8 deaths, all from phthisis pulmonalis. The admission rate for primary syphilis, 149·1 per 1,000, shows an increase of 47·2 on that for the previous year, in that for the secondary form, however, there was a slight decrease. There was a general increase of prevalence of venereal disease, and including gonorrhœa and its sequelæ the admission rate amounts to 322·3 per 1,000, which is greater by 84·8 than that of the former year.

Diseases of the nervous system caused 25 admissions and 2 deaths; the latter occurred at Orange Walk from meningitis and paralysis, both these cases are said to have had their origin in syphilitic disease. Heart diseases caused an average number of admissions, and there was one death from valvular disease. Respiratory diseases were less prevalent than usual, but there were two deaths, one from abscess of the lungs and the other from pneumothorax. Digestive disorders were prevalent, and caused an admission rate of 125·9, a good deal above the average; dyspepsia, diarrhœa, and dysentery were the chief causes of admission; there were five deaths, three due to dysentery, one to cirrhosis of the liver, and one returned as ascites. The high admission rate for urinary diseases, 157·1 per 1,000, is caused chiefly by the prevalence of gonorrhœa, which alone reached 133·0 per 1,000. Injuries of a local character caused 72 admissions, chiefly wounds, contusions, &c., none of which call for special remark, except a case of gunshot wound, *self-inflicted*, at Up Park Camp, Jamaica, by a young soldier of the 2nd West India Regiment, who while on sentry discharged his rifle, loaded with ball cartridge, under his chin, the ball destroyed part of the lower jaw, escaped by the mouth and carried away the tip of the nose. The man eventually recovered, with a good deal of disfigurement and loss of articulation; he was invalided.

Surgical Operations.—None are recorded.

Invaliding.—Forty-seven men were invalided and discharged the service; the annual rate per 1,000 was 41·96 less than that of the previous year by 20·85, but nearly identical with the average rate for 10 years. The principal causes of invaliding were rheumatism, secondary syphilis, phthisis pulmonalis, epilepsy, heart disease, debility, &c.

West Indies Command.

Sanitary Conditions.—The Senior Medical Officer reports that "the health of "the black troops serving in the Command has been good, the sanitary state of "their barracks and hospitals satisfactory, drainage good, water supply good "and sufficient, except in Honduras, where water ran short at end of March, "but store tanks are to be built to meet this emergency. At Up Park Camp, "Jamaica, the water requires filtration before being used for drinking "purposes."

VII.—ON THE HEALTH OF THE TROOPS SERVING IN WESTERN AFRICA.

Sickness and Mortality.

1. White Troops.

West Africa.

The white troops consisted of the European non-commissioned officers of the West India regiments and the officers serving in the Command. The average annual strength of the former was nine, the admissions into hospital 33, and there was one death. The rate of sickness was therefore very high, and was principally due to remittent fever. The death is returned as having been caused by suppression of urine. Invaliding was necessary in two cases, one of remittent fever and one of debility. The average annual strength of the officers was 28, the admissions to hospital 49; there were no deaths, but seven officers were invalided. The rate of sickness was 1750·0 per 1,000, which, though high, is but little more than half that for the previous year. The prevailing disease was, as usual, remittent fever, and caused 28 of the admissions, the remainder being due to dysentery, diarrhœa, debility, and other diseases. The causes of invaliding were remittent fever, dysentery, gonorrhœal, rheumatism, fistula in ano, and debility.

2. Black Troops.

The troops stationed on the coast of Africa during the year were the headquarters of the 1st West India Regiment at Sierra Leone, and a detachment of the same regiment at Cape Coast Castle.

The average annual strength of non-commissioned officers and men was 580, the admissions into hospital 723, the deaths 16, and the average constantly sick 35·29. The annual rates per 1,000 from these figures are therefore—admissions, 1246·6; deaths, 27·58; and constantly sick, 60·84. Compared with those of the previous year there is noticed a diminution in admission rate of 418·7 per 1,000, and in the constantly sick of 6·22, but there is an increase in the death rate of 7·81 per 1,000. In comparison with the average for 10 years there is also a considerable decrease of admission rate, while the death rate is somewhat higher. The average sick time to each soldier was 22·21 days, less than the corresponding period in the preceding year by 3·84 days, and the average duration of each case of sickness, 17·82 days, was greater by 2·08 days.

The admissions and deaths in the various classes and orders of disease are shown in Abstract IX.

With the exception of one case all the admissions under the febrile group of diseases were due to paroxysmal fevers, and numbered 106, or 182·8 per 1,000, and there were two deaths, or 3·45 per 1,000. Both the deaths and 99 of the admissions were caused by remittent fever. Compared with the foregoing year, however, there is a decrease in the rates of prevalence and mortality from these fevers of 273·4 and 2·20 per 1,000 respectively. In addition to their diminished frequency, it is stated that paroxysmal fevers were very mild, and that the rainfall for the year having been greater and more constant may account for this in some measure, as an intermittent rainfall with much heat always causes a high rate of paroxysmal fevers.

In the *constitutional group* of diseases the admission rate, 189·6 per 1,000, is less than that of the previous year by 126·8, and than the average rate by 84·1 per 1,000. This decrease is principally due to the diminished prevalence of syphilis, both primary and secondary, but also in some measure to the diminution in the rates for rheumatism and tubercular diseases. The rate of prevalence of syphilis was 108·6 per 1,000, but little more than half that for

West Africa.

the preceding year; however, as the admission rate for gonorrhœa and its sequelæ shows an increase, that for venereal diseases of all kinds, 306·9 per 1,000, is less only by 75·8 than in the year 1881. Among the cases of tubercular disease were eight cases of phthisis pulmonalis, all of which ended fatally.

Among local diseases an increase is observed in diseases of the nervous system, due to the occurrence of a good many cases of neuralgia. Diseases of the circulatory system caused a few admissions, but one death from aneurism of the sub-clavian artery. Respiratory diseases were rather prevalent, chiefly bronchitis and pneumonia, from the latter of which there were two deaths. Digestive disorders caused 81 admissions, principally from dysentery, diarrhœa, and hepatic affections; two deaths occurred, one from diarrhœa and the other from hepatitis. The remaining orders show no prevalence of disease, and do not call for special mention. The admissions for *local injury* numbered 63; they were of no moment except a case of compound fracture of the skull and one of gunshot wound.

No case of *suicide* or *self-inflicted* injury is returned.

Surgical Operations.—None are recorded.

Invaliding.—Only one man was discharged the service by invaliding during the year. The case was one of impaired vision.

Women.—The average annual strength was 65, the number of attacks of illness 40, and deaths 2. The sick and death rates were 615·3 and 30·77 per 1,000 respectively, both considerably less than those in the previous year. Remittent fever was the chief cause of admission, and one death was due to it, the other to childbirth.

Children.—In an annual average strength of 34 there were 18 cases of sickness and 4 deaths, being in the annual ratios per 1,000 of 529·4 and 117·65 respectively. Remittent fever and dysentery were the chief causes of sickness, and the deaths were caused by these two diseases, one case each, and premature birth, two cases.

Sanitary Conditions.—The Senior Medical Officer, Surgeon-Major D. Parke, states that "it does not appear that the health of the men has been affected by "defects in sanitation, although a long correspondence on the subject of the "drainage at Cape Coast Castle has occupied the attention of both military "and colonial authorities.

"A new infection ward has been added to the hospital at Sierra Leone, "which appears well adapted and suitable in every respect.

"There has been no overcrowding either in barracks or hospital, no change "in the scale of diet, nor other alteration in any matter calling for remark.

"Situated as Tower Hill Barracks are, on the summit of a conical hill with "a steep descent on every side, no ill effects should be felt from the insanitary "state of the neighbourhood, if such existed; but as far as limited experience "goes, and the cursory observation one is able to make passing through the "town, it appears clean and well kept. The re-roofing of the officers' quarters "is the most important matter at the present time."

VIII.—ON THE HEALTH OF THE TROOPS SERVING AT THE CAPE OF GOOD HOPE AND AT ST. HELENA.

Sickness and Mortality.

Cape of Good Hope and St. Helena.

The Principal Medical Officer, Deputy Surgeon General E. M. Sinclair, reports that at the commencement of the year 1882 a large number of troops, nearly 7,000, were serving in the Command after the hostilities in the previous year. The largest proportion was in Natal, but as the Transvaal was gradually settling down a number were withdrawn, including 1st Battery A Brigade Royal Artillery, No. 2 Company Royal Engineers, the 7th Hussars, and three infantry regiments, so that by June the garrison was reduced to its present strength, formed of various corps and distributed as follows:—In Natal, average strength 2,701; 6th Dragoons, 1st Battery C Brigade Royal Artillery, 1st Battalion Welsh Regiment, 2nd Battalion Northamptonshire Regiment, and detachments of Departmental Corps. In the Western district, Cape Colony, average strength 1,038; 5th Company Royal Engineers, 7th Battery 1st Brigade Western Division Royal Artillery, 1st Battalion Argyll and Sutherland Highlanders, and detachments Departmental Corps. In St. Helena, No. 9 Battery 1st Brigade Western Division Royal Artillery, and detachments Argyll and Sutherland Highlanders and Royal Engineers, &c.

The average strength for the whole Command was 3,944, the admissions into hospital were 2,749, and the deaths 77 (including those of three invalids who died after arrival at home). Out of the above, 83 of the admissions and one death occurred at St. Helena. The average number constantly sick was 224·14.

From these figures we find the following ratios per 1,000. Admissions 697·0, deaths 19·52, and constantly sick 56·83. These compare favourably with the corresponding ratios for the previous year, the admission rate showing a decrease of 59·7 and the death rate one of 17·43 per 1,000; in the rate of constantly sick, however, there is a slight increase. Compared also with the average of similar ratios for the preceding 10 years there is a considerable decrease, both in admission and death rates, but a slight increase in that of constantly sick.

The average sick time to each soldier was 20·56 days, and the average duration of each case of sickness 29·50 days, longer than the corresponding periods in the preceding year by 2·24 days and 5·29 respectively.

The more important of the health statistics of the various corps serving in the Command are shown in Abstract XLV.

At the commencement of the year, Newcastle, Ingagane River, Ladysmith, and St. John's River were occupied by troops, but were all subsequently evacuated. Most of the troops from the Ingagane and Newcastle proceeded in the latter part of January and in February to a healthy site on the Mooi River, about 40 miles north of Pietermaritzburg where they remained some months.

The health of the troops was good, excepting in the early part of the year when enteric fever was very prevalent in Natal. The admissions and deaths in the different classes and orders of diseases are shown in Abstract No. X.

General Diseases.—*Febrile group.*—The total number of admissions under this head was 635, and the deaths were 47, being in the annual ratios of 161·0 and 11·92 per 1,000 respectively, both much higher than in the preceding year, the former by 22·2 and the latter by 7·88 per 1,000.

Eruptive fevers caused three admissions, including two cases of small-pox at Capetown, the disease being at the time epidemic among the civil population.

Continued Fevers.—The total number of admissions was 608, equal to a rate of 154·2 per 1,000, which exceeds the similar rate in the previous year by 87 per 1,000. The deaths 47 (all from enteric fever), give the high rate of 11·92 per 1,000. Enteric fever caused 240 admissions and 47 deaths, all the cases occurred in Natal.

Cape of Good Hope and St. Helena.

The disease had prevailed to a considerable extent at the close of 1881, and continued during the earlier part of the year under report, 226 cases and 43 deaths occurring in the first quarter, and 8 cases and 4 deaths in the second. In the third quarter of the year there were no cases, but in the fourth, when the hot season again set in, 6 cases, but no deaths appeared.

The Principal Medical Officer remarks that "this fever has always occurred "amongst troops in camp in Natal in the hot season, when the annual rains "wash all the filth and refuse down into the watercourses, and on the sub- "sidence of the flooded state of the rivers and streams, dirty muddy banks, "and refuse not carried away, are left exposed to the sun's rays with an almost "tropical heat. In the Western District no case of enteric fever occurred, in "fact, the disease is seldom met with amongst the troops there, and I can only "account for this in a great measure by the difference in the climatic condi- "tion of Cape Colony during the hot season, as no rain falls at that time, the "wet season being between May and October, that is, during the winter months."

The Principal Medical Officer is of opinion that the water supply is the means of conveying and propagating this disease, and points out that at Pietermaritzburg where the water is supplied from the town main and is of good quality cases seldom occur, while at the up country stations in Natal, where enteric fever was so prevalent, the water supply was in all open to serious objections, but unavoidable under the circumstances of camp life. All these stations were evacuated during the first half of the year, and there remain only Pietermaritzburg, Pinetown, and Durban where troops are quartered. It is noticed that but few cases occurred in the hot season at the latter part of 1882 as compared with the corresponding period of 1881, due no doubt to the troops being better housed and under better sanitary conditions generally than they had been in the up country camps.

The per-centage of deaths to cases treated was 19·5 as compared with 16 in the previous year, this difference is accounted for by the large number of cases that remained in hospital at the close of 1881, many of which terminated fatally.

Of the 47 fatal cases, there was perforation of intestines in 11 cases, peritonitis without perforation in 4, and abscesses were found in the spleen in two cases; all showed the characteristic lesions in varying degrees, and in a few instances the intestines near the ileo cœcal valve were almost gangrenous.

The ages of the fatal cases were, under 22 years, 7 cases; from 22 to 24 years, 22 cases; from 25 to 27 years, 10 cases; and above 27 years, 8 cases.

Of the other forms of continued fever, febricula caused 283 admissions and simple continued fever 85. It is remarked that some of the cases were a long time under treatment, and that it is not improbable that some mild cases of enteric fever were included under these heads.

Paroxysmal fevers are represented by 23 admissions for ague; 21 of the cases occurred in Cape Town, the subjects being men who had recently returned from serving in Mauritius, where they had been exposed to malarial influences.

Among *constitutional diseases* it is observed that there were 112 admissions from rheumatism, of which 19 were of the acute form. Considering that most of the troops were under canvas during a large portion of the year both in Natal and the Cape, it is noticeable that this admission rate, 28·4 per 1,000, is considerably below the average, and less than that for the preceding year.

Primary syphilis shows an admission rate of 49·4 per 1,000, which is an increase on the corresponding rate for 1881 of 13 per 1,000. In the secondary variety, however, there was a somewhat diminished prevalence.

Including gonorrhœa and its sequelæ, the admission rate for venereal affections amounts to 114·8 per 1,000, which is 32·7 per 1,000 above the average rate for the previous three years; but still the Principal Medical Officer remarks that the troops having been in the field in the earlier part of the year had then not much opportunity of contracting disease.

Phthisis pulmonalis caused 9 admissions, 2 being at St. Helena. Seven cases were invalided, 1 of which proved fatal after arrival at home. A fatal case of cancer of the pancreas occurred at Pinetown, Natal.

Local Diseases.—The admission rate in the different orders of disease in this class is in most cases below the average of former years, particularly in

diseases of the circulatory, respiratory, and digestive systems. There is an increase under the urinary system; this, however, is due principally to the prevalence of gonorrhœa. Diseases of the nervous system caused 41 admissions and 5 deaths. With the exception of one case at St. Helena, all occurred in South Africa. The principal affections were epilepsy, meningitis, sunstroke, and mental disease. The deaths were caused by meningitis 3 cases, apoplexy 1, and hemiplegia 1 case. *Cape of Good Hope and St. Helena*

Diseases of the circulatory system caused 48 admissions, principally from valve disease of heart and palpitation; 2 deaths occurred, 1 from aneurism and the other from valvular disease. Respiratory diseases were bronchial affections and a few cases of pneumonia and pleurisy. A large number of admissions occurred from diseases of the digestive system, principally dyspepsia, diarrhœa, dysentery, and hepatic affections. There were 10 deaths in all, 2 from dysentery occurring in invalids after arrival at home. The remainder were due to dysentery in 4 cases, ulceration of intestines and perforation of intestines, of each 1 case, and hepatic abscess 2 cases.

Debility caused 144 admissions, or 36·5 per 1,000. This rate is twice as great as that of the preceding year, but does not exceed the average, as might have been expected considering the number of cases of fever which occurred, and which would subsequently render admissions under this head probable.

Poisons.—Eleven cases are returned, 5 of delirium tremens and 6 of alcoholic poisoning. Two of the former and one of the latter occurred in St. Helena. One death took place from alcoholic poisoning at Pietermaritzburg.

General injuries.—No admissions are recorded under this head, but 5 deaths occurred, all from asphyxia by drowning. Three of the cases happened in the 1st Welsh Regiment at Newcastle, one in the same regiment at St. John's River, and the last in the 2nd Northumberland Regiment at Pietermaritzburg.

Local injuries.—302 admissions are returned, among which were 16 cases of fracture, 87 of wounds, one of gunshot wound, and many of contusions and sprains, &c. There were three fatal cases, one of concussion of the brain in a man of the Welsh Regiment at Pietermaritzburg, the result of a fall from a horse; one of fracture of base of skull in a man of the Argyll and Sutherland Highlanders at Cape Town, also due to being thrown from a horse, and one of contusion with rupture of the liver in a man of the 6th Dragoons at Pinetown due to a kick from a horse.

No case of *suicide* or *self-inflicted* wound is recorded.

The only *surgical operation* returned is one of amputation of finger on account of injury resulting fram the accidental bursting of a time fuse.

Invaliding.—130 non-commissioned officers and men were sent home from South Africa, and 3 from St. Helena. The ratio per 1,000 for the Command was therefore 33·72, a considerable decrease on the similar rate for the previous year, and also much below the average. Debility after enteric fever was the principal cause of invaliding, 35 men being sent home on this account. Constitutional diseases, chiefly rheumatism and phthisis pulmonalis, follow with 26 cases, then diseases of the nervous system 12. Of the circulatory and digestive systems 14 and 15 respectively, and others with lesser numbers. 124 men, or 31·44 per 1,000, were finally discharged the service; the causes being principally diseases of the circulatory system, of the digestive and respiratory systems, and injuries received in action.

Officers.—In an average annual strength of 174 there were 87 attacks of illness and 4 deaths, being in the annual ratios of 500 and 22·98 per 1,000 respectively; the rate of prevalence of sickness is somewhat higher than in the previous year, but that of mortality considerably lower. Among the cases returned were six of enteric fever. The causes of death were pericarditis, aneurism of the aorta, hepatitis and hepatic abscess. 17 officers were invalided.

Women and Children.—As most of the troops were in the field in the early part of the year, and as the families of the 6th Dragoons and 1st Welsh Regiment were not sent out until later, the number of women and children was small.

The average annual strength of women was 136, the number of admissions 63, and of deaths 2.. The ratio of admissions per 1,000 was 463·2, and of deaths 14·70.

Cape of Good Hope and St. Helena.

The average annual strength of children was 213, the number of admissions 58, and of deaths 7, being in the annual ratios of 272·3 and 32·86 per 1,000 respectively. One case of small-pox and seven of measles occurred at Cape Town. The deaths were due to measles, meningitis, convulsions, bronchitis, &c.

Sanitary Conditions.—After the withdrawal of the troops from the up country stations they were quartered for some months on the Mooi River; but latterly the troops were only stationed at Pietermaritzburg, Pinetown, and Durbar: many being under canvas. Late in the year authority was received to hut all troops not so accommodated. Iron huts were accordingly built as quickly as possible, and those for the second infantry regiment at Pietermaritzburg were completed and occupied before close of the year; the remainder were in progress. At Pinetown huts for the reception of the cavalry were in course of construction at the end of the year, but no provision for hospital had been made beyond one small hut holding 8 men. This was duly represented.

In Cape Town the troops have occupied the main barracks and castle. The Principal Medical Officer states they are both old and unsuitable, but apparently have not been prejudicial to health. He also remarks on the unfitness of the married quarters in the main barracks.

Small-pox was very prevalent among the civil population about the middle of the year; the greater number of the troops were therefore moved to camp at Wynberg. The precautions taken were most successful, for while small-pox prevailed on every side and decimated the coloured population, only 2 mild cases amongst the men (and 1 young girl amongst families) occurred.

The Principal Medical Officer states that the "drainage and sanitary con- "dition of Cape Town are as bad as they possibly can be, and though fre- "quent and pressing applications have been made for improvement of this in "the vicinity of the barracks, little if anything has been done."

The following new buildings have been completed and sanitary improvements effected in the course of the year:—

Natal.—Newcastle.—New hospital for 112 beds.

Pietermaritzburg.—Seven iron huts accommodating 675 men completed suitable as temporary buildings; mortuary at hospital completed.

New hospital block for surgery stores and offices.

Town water introduced into Fort Napier.

Pinetown.—A small iron hut for hospital, 8 beds.

Huts for cavalry in progress.

Cape Town.—Some improvements in town main drain pipes which open into the sea near hospital. These, however, have been lengthened and improved, but are not yet entirely satisfactory.

The health of the troops in Saint Helena and the sanitary condition of the barracks and their vicinity appears to have been very satisfactory. The following improvements have been made. Verandahs have been erected on side of men's barracks exposed to the sun. A new swimming bath has been built. The drainage has been somewhat improved.

IX.—ON THE HEALTH OF THE TROOPS SERVING IN THE ISLAND OF MAURITIUS.

Sickness and Mortality.

Mauritius. The force which served in Mauritius during the year was composed of the 8th Battery, 1st Brigade Western Division Royal Artillery, a detachment of the 2nd Battalion Northamptonshire Regiment, and a few men of Departmental Corps.

In September a draft of 14 non-commissioned officers and men, Royal Artillery, arrived from England, and a draft 125 strong for the infantry, of which 82 men of these were from England and 40 from Natal.

The average annual strength of non-commissioned officers and men was 382. There were 946 admissions into hospital and 5 deaths, being in the annual ratios of 2476·4 and 13·08 per 1,000 of the strength. The average number constantly sick was 36·36, or at the rate of 95·18 per 1,000.

Compared with the corresponding rates for the previous year there is an increase of 295·8 per 1,000 in that for admission and a decrease of ·81 and ·48 respectively in those of death and constantly sick. In comparison with the average of the similar rates for the preceding 10 years, the increase of admission rate amounts to 514·3 per 1,000, but the rate of mortality is less by 4·04. The rate of constantly sick is higher by 34·04 per 1,000. The average sick time to each soldier was 34·74 days, and the average duration of each case of sickness 14·03 days, both being slightly less than the corresponding periods in the previous year.

The more important of the health statistics of the corps which served in the garrison are shown in Abstract XLV. The admission rates of all are high, especially that of the infantry. Three of the deaths occurred in the Infantry, one in the Artillery, and one in the Army Hospital Corps. The Senior Medical Officer, Brigade Surgeon E. J. Hopwood, remarks that "the battery "of Artillery which has been two hot seasons here is generally in a better "state of health than the detachment of Infantry which has seen only one. "The causes are, 1st, the superior position of the Artillery barracks; 2nd, the "superior physique of the men; and 3rd, that the men of weakly constitution "have been weeded out by death or invaliding. The infantry detachment "arrived in May 1881; most of the men are so saturated with malaria that "they are not fit for active service."

The admissions and deaths in the various classes and orders of diseases are shown in Abstract XI.

General Diseases.—*Febrile group.*—Eruptive fevers are represented by one mild case of scarlet fever, and continued fevers by 21 cases, returned as febricula, none of which call for special mention; 554, or more than half the total number of admissions from all causes, were due to paroxysmal fevers. The admission rate, 1450·3 per 1,000, is greater than that for the previous year by 514·2 per 1,000, and is also considerably above the average; 535 of the admissions are returned as ague and 19 as remittent fever, 3 of the latter proving fatal.

No case of enteric fever occurred, and during the last 10 years only 5 cases are recorded. Brigade Surgeon Hopwood, however, points out the probability of some cases diagnosed as severe continued or remittent fever proving to be enteric fever, and believes this may have been the case in a few instances.

Four hundred and twenty-five cases of ague and 14 of remittent fever were admitted at Port Louis, and 110 of the former and 5 of the latter at Curepipe; but the Senior Medical Officer states "that there does not appear to have been "a single admission for malarial fever at Curepipe, unless the patient had "suffered from the disease previous to his being sent there."

In the *constitutional group* of diseases there were 98 admissions, principally due to syphilis. The admission rate for primary syphilis, 133·5 per 1,000, is less than that of the previous year by 24·8, but the rate for the secondary

Mauritius.

form, 89·0 per 1,000, shows a considerable increase. Taking the admissions for gonorrhœa, 81·2 per 1,000, a decrease of 66·0 per 1,000, we find the total admission rate for venereal diseases to be 311·5 per 1,000, less than in 1881 by 35·7. The average constantly sick, however, 24·94 per 1,000, shows an increase of 1·58, due, doubtless, to the prevalence of secondary syphilis.

Local Diseases.—In none of the orders of this class of diseases has the number of admissions been large, and in the majority of them a decrease of admission rate is noticed. This is particularly observed in diseases of the respiratory system, in which the ratio has fallen to 23·6 per 1,000 from 75·0 in the previous year, in diseases of the urinary system due to the diminished prevalence of gonorrhœa, as above mentioned, and in diseases of the digestive system, in which the admission rate, 219·9 per 1,000, shows a decrease of 55·1. Many of the admissions in this order were due to dyspepsia, and were attributable, according to the Senior Medical Officer, "to drink and the bad rum "manufactured in the island and sold in the numerous Chinese shops."

Next to this disease, diarrhœa, dysentery, and hepatitis caused the greater number of admissions, and a death occurred from each of the last two affections. Delirium tremens caused two admissions as compared with six in the previous year. There was a considerable diminution in the number of admissions for local injuries. None of the cases call for special remark.

No case of *suicide* or *self-inflicted* injury is returned.

No *surgical operations* are recorded.

Invaliding.—The number of men invalided home was 9, equal to 23·56 per 1,000, which is less than the previous year by 51·44 and than the average of 10 years by 18·59 per 1,000. The causes of invaliding were ague, debility, heart disease, and stricture of the urethra. Six men, or 15·70 per 1,000, were finally discharged, the rate being less than in the former year, but about the average of 10 previous years.

Officers.—Out of an average strength of 23 officers there were 19 attacks of illness, or at the rate of 826·0 per 1,000. Fever was the principal cause of sickness. No deaths are returned, but one officer was invalided for hepatitis.

Women.—The average annual strength was 16. There were 30 admissions into hospital, but no deaths; the cases were chiefly paroxysmal fevers and debility.

Children.—In an average annual strength of 34 there were 47 admissions, 27 being from fever. A few cases of whooping cough occurred, and there were 2 deaths from diarrhœa.

Sanitary Conditions.—The unhealthiness of the troops, due to the prevalence of malarial fever, is strongly commented on by the Senior Medical Officer. He alludes to the malarious condition of the town of Port Louis, and the faulty position of the barracks and hospital therein. He points out that to improve the health of the troops it is absolutely necessary that they should be quartered elsewhere than in Port Louis, and as far as possible every man should be removed from the unhealthy to the healthy parts of the island in anticipation of the sickly season. If troops were sent to Curepipe sanatarium immediately on landing at Mauritius it is believed they would enjoy fair health, and might be expected to keep in it for three years, but if it were decided to hold Port Louis as a station, the advisability of removing troops from Mauritius every 12 months is suggested.

The sanitary improvements during the year have been as follows:—

At Port Louis.—Increased latrine accommodation for officers. A skittle alley has been erected for the men and a coffee bar arranged.

It is stated that the drainage in and about the Line barracks and hospital in Port Louis is not satisfactory.

At Curepipe new latrines and urinals have been erected and the old ones demolished. Ablution rooms have been constructed to huts Nos. 1 and 2. The glazing of windows of the small huts has been completed. The guard-room has been enlarged and the verandah renewed. The old ablution room has been converted into a temporary kitchen for the hospital.

A verandah has been constructed on the north front of the canteen. The men's bath has been reconstructed and the watercourses cleared out. A considerable area of copse has been cleared of brushwood, flower gardens have been formed, and the grounds generally improved.

X.—ON THE HEALTH OF THE TROOPS SERVING IN THE ISLAND OF CEYLON.

Sickness and Mortality.

I.—White Troops.

Ceylon.

The troops serving in the island of Ceylon during the year comprised the 5th and 6th Batteries, 1st Brigade Eastern Division Royal Artillery, the 1st Battalion Royal Dublin Fusiliers, detachments Royal Engineers, and Army Hospital Corps and Garrison Staff.

The average annual strength of non-commissioned officers and men was 990, the number of admissions to hospital 1,185, deaths 8, and average number constantly sick 62·35. The admission rate therefore is 1197·0 per 1,000, the death rate 8·08, and that of constantly sick 62·98. In comparison with the corresponding rates for the previous year we find a decrease in all, amounting, in the rate of prevalence of disease, to 189·5 per 1,000, in that of mortality to 8·50, and in that of constantly sick to 10·71 per 1,000; but compared with the corresponding average rates for the preceding ten years an increase of admission and constantly sick rates of 204·4 and 11·06 per 1,000 respectively is observed, but the death rate is low, being 7·59 per 1,000, or nearly half below the average. The average sick time to each soldier was 22·99 days, and the average duration of each case of sickness 19·20 days, both being somewhat less than the corresponding period in the previous year.

The more important of the health statistics of the corps which served in the garrison are shown in Abstract XLV.

In the infantry regiment the admission and death rates were 1289·6 and 10·48 per 1,000 respectively, in the artillery the former rate was 955·6, but no deaths occurred. The admissions and deaths in the different classes and orders of diseases are shown in Abstract XII.

General Diseases.—The total number of admissions under the *febrile group* amounted to 82· with 1 death, the admission and death rates, 82·8 and 1·01 per 1,000, are less than those for the previous year by 47·8 and 4·17 per 1,000 respectively. Eruptive fevers caused no admissions, though small-pox was for a time prevalent among the inhabitants in an epidemic form, the troops, however, escaped. One admission is shown for enteric fever, this occurred at Colombo, and could not be traced to any defective sanitary condition, the patient made a good recovery. There is also one death returned from this disease, it occurred at Kandy, and the case remained under treatment from the previous year. Simple continued fever and febricula caused 74 admissions, none of the cases call for notice. Paroxysmal fevers show five admissions, three for ague and two for remittent fever; there were no deaths.

In the *constitutional group* of diseases it is observed that rheumatic affections were more prevalent than usual, probably due to the greater amount of wet weather during the year. Tubercular diseases on the other hand show a considerable decrease, three admissions and no deaths being returned as against 15 admissions and four deaths in the previous year. The admission rate for primary syphilis, 123·2 per 1,000, is less than that in 1881 by 72·7, but that for secondary syphilis, 40·4 per 1,000, is greater by 23·8.

Including gonorrhœa and its sequelæ the annual rate of admission for venereal disease is 257·5 per 1,000, less by 98·0 than that for the preceding year. The average constantly sick from these diseases, 17·84 per 1,000, is less by 5·11 than in 1881.

Local Diseases.—Under the head of diseases of the nervous system are shown 25 admissions, six of which were due to mental disease, there was one case of sunstroke, but the remainder of the cases were not of importance. Diseases of the circulatory system were slightly more prevalent than in the previous year, the admissions were chiefly due to palpitation; two deaths occurred, one from valve disease of the heart and the other from aneurism of

Ceylon.

the aorta. Disorders of the digestive system were rather more numerous than in the previous year, though not above the average. Dyspepsia, dysentery, diarrhœa, and hepatic affections were the principal causes of admission; four deaths are returned, dysentery being the cause of two, and hepatitis and abscess of the liver of one each. Respiratory affections were under the average and the cases mostly unimportant. Diseases of the urinary system show a reduced admission rate due to the diminished prevalence of gonorrhœa. Diseases of the absorbent system were also much less frequent, and diseases of the cutaneous system slightly so.

Under the head of *Poisons* 21 admissions are shown, 18 as alcohol, and 3 as delirium tremens, but no death occurred.

One death is returned from asphyxia by drowning, a private, Royal Dublin Fusiliers, having been accidentally drowned at Colombo.

The admission rate for local injuries shows a decrease on that for the previous year, none of the cases call for special remark.

No case of *suicide* or *self-inflicted injury* is returned.

There were no *surgical operations.*

Invaliding.—56 men were invalided home, and 18 finally discharged during the year, being in the annual ratios of 56·56 and 18·18 per 1,000 of strength, which, as compared with the corresponding rates for the preceding year, show an increase of 16·15 in the former and a decrease of 8·75 per 1,000 in the latter case, and in both cases the rates for the year under report are above the average of the foregoing 10 years. The principal causes of invaliding were dysentery, hepatitis, secondary syphilis, cardiac disease, rheumatism, mental disease, &c.; and of final discharge, circulatory and digestive disorders, tubercular affections, and rheumatism.

Officers.—In an average annual strength of 52 officers there were 19 attacks of illness and no deaths. The rate of sickness per 1,000 is therefore 365·3, and is less than in 1881 by 34·7 per 1,000. Two officers were invalided for ague.

Women and children have been healthy; in an average annual strength of 43 of the former there were 22 admissions, or 511·6 per 1,000, and in an average annual strength of 58 of the latter there were 6 admissions or 103·4 per 1,000. No death occurred.

Sanitary conditions.—The Senior Medical Officer, Brigade Surgeon Hayden, states "that the health of the troops was satisfactory during the year." The sanitary arrangements of the barracks are reported to have been generally in a satisfactory condition, but complaints of the insanitary condition of the old Fort ditch were still made. Recommendations have been put forward at various times, without result, but it is now stated by the Senior Medical Officer that "he understands it is contemplated to adopt some measures to "mitigate the nuisance complained of."

The water supply at Trincomalee, which had been precarious and sometimes inadequate, has been improved, and is now said to be sufficient. A tank to collect rain water has been furnished, and a force pump provided as recommended.

No new buildings have been completed or commenced during the year.

It was recommended by the Senior Medical Officer that a daily issue of potatoes should be supplied to the troops, but he states that up to the present it has been found impracticable, owing to the expense and difficulty of obtaining a sufficient quantity; he is of opinion, however, that there is no deficiency of vegetables generally.

A recommendation that the rations should be varied by the occasional issue of mutton has not yet been carried out.

Asiatic Troops.

The native troops consist of a company of Gun Lascars, distributed in the stations of Colombo, Galle, and Trincomalee. The average strength was 84, the admissions to hospital 44, or 523·8 per 1,000. There was no particular prevalence of sickness. One death occurred at Colombo from confluent small-pox.

XI.—ON THE HEALTH OF THE TROOPS SERVING IN CHINA AND THE STRAITS SETTLEMENTS.

Sickness and Mortality.

I.—White Troops.

China and Straits Settlements.

The troops serving in the command during the year were the 8th and 9th Batteries, 1st Brigade, Southern Division, Royal Artillery, a detachment of Royal Engineers, the 2nd Battalion East Kent Regiment (the Buffs), the 1st Battalion Royal Inniskilling Fusiliers, and detachments of departmental corps, &c.

Early in the year an exchange of stations was effected between the East Kent Regiment and Royal Inniskilling Fusiliers, the former regiment from Singapore taking the place of the latter at Hong Kong, and *vice versâ*.

The average annual strength of non-commissioned officers and men was 1,663; there were 1,585 admissions into hospital and 10 deaths, and the average number constantly sick was 83·77, being in the annual ratios of 953·1, 6·01, and 50·37 per 1,000 respectively. In comparison with the corresponding rates of the previous year a decrease of 126·0 per 1,000 has occurred in the admission rate, of 3·46 per 1,000 in the death rate, and of 6·18 per 1,000 in that of constantly sick; and as compared with the average similar rates for the preceding 10 years, the decrease in those of prevalence and mortality amounts to 193·1 and 6·96 per 1,000 respectively; there is, however, a slight increase in the rate of constantly sick.

The average sick time to each soldier during the year was 18·39 days, and the average duration of each case of sickness 19·29 days, the former being shorter than the corresponding period of the year 1881 by 2·25 days, and the latter fractionally longer.

The proportions in which the two divisions of the command contributed to these results are shown in the following table:—

Stations.	Average Annual Strength.	Admissions into Hospital.	Died.			Invalided home.	Average daily Sick.	Ratio per 1,000.				Average Sick time to each Soldier.	Average Duration of each case of Sickness.
			In the Command.	Of Invalids.	Total.			Admissions.	Deaths.	Invalided.	Average daily Sick.		
												Days.	Days.
Hong Kong -	845	794	5	—	5	53	41·10	939·6	5·91	62·72	48·64	17·75	18·89
Straits Settlements.	818	791	5	—	5	34	42·67	966·9	6·11	41·56	52·16	19·01	19·69

In the Hong Kong division of the command the admission and death rates are lower than those of the preceding year by 136·2 and 3·28 per 1,000 respectively; and in the Straits Settlements division the decrease of admission rate amounts to 115·3 and of death rate to 3·64 per 1,000.

The more important of the health statistics of the different regiments and corps which served in the command will be found in Abstract XLV.

Compared with the returns for the previous year the admission and death rates of the Artillery are lower by 67·8 and 5·13 per 1,000 respectively, in the East Kent Regiment they are lower by 151·6 and 1·89 per 1,000, and in the Inniskilling Fusiliers the admission rate is lower by 144·1, and the death rate lower by 3·75 per 1,000. The numbers of the departmental corps being so small, comparison of their ratios would be of no value.

China and Straits Settlements.

The admissions and deaths in the various classes and orders of diseases are shown in Abstract No. XIII.

General Diseases.—The total number of admissions for diseases of the *febrile group* was 423, equal to an annual ratio of 254·3 per 1,000, which is 17·0 per 1,000 higher than in the former year, and is also above the average. Eruptive fevers are represented by a single case of measles at Hong Kong. Continued fevers show an increase of prevalence of 28·0 per 1,000. Enteric fever caused three admissions, two at Hong Kong, which did well, and one at Penang, which proved fatal. The remaining admissions occurred pretty nearly equally at Hong Kong and the Straits Settlements. One fatal case returned as simple continued fever occurred at Hong Kong. Paroxysmal fevers caused 102 admissions, or 61 3 per 1,000; less by 10·5 than in the former year.

There were 96 cases of ague and six of remittent fever, but no death occurred. The greater number of the cases took place in Singapore.

The rate of admission for diseases of the *constitutional group* shows a slight decrease. The admissions for primary syphilis numbered 79, equal to an annual ratio of 47·5 per 1,000, being 4·3 per 1,000 less than in 1881; the rate for the secondary form, 16·3, is, however, greater by 6·3 per 1,000. One death is returned from secondary syphilis; it occurred at Hong Kong.

Including gonorrhœa and its sequelæ, we find that the admission rate for all forms of venereal disease is 147·4 per 1,000, being a decrease of 8·0 per 1,000 on the rate for 1881. There was but little difference in the prevalence of venereal disease in the two divisions of the command, the number of admissions at Hong Kong being slightly the greater.

Tubercular diseases caused nine admissions and one death, which compares favourably with the former year, when there were 24 cases and 5 deaths. One case of phthisis pulmonalis occurred at Hong Kong, the remainder, including the fatal case, at Singapore. A case of scurvy occurred at Hong Kong, and 12 cases of anæmia at Tanglin, concerning which the Medical Officer in charge at that station remarks that "the number of cases is rather high, but "most of the men had previously suffered from fever at Hong Kong, which "left their blood in an impoverished state, accompanied in some instances by "severe palpitation of the heart."

Local Diseases.—Under the head of diseases of the nervous system 29 admissions and three deaths are returned, two of the admissions were due to mental disease, and eight, with one death, which occurred at Fort Canning, Singapore, to sunstroke. A fatal case of meningitis happened at Penang, and one of apoplexy at Hong Kong. Of 33 admissions for diseases of the circulatory system, 23 were caused by palpitation, two by valve disease of the heart, and one by a fatal case of pericarditis. Respiratory diseases have been much less frequent, the admission rate, 27·0 per 1,000, being half that for the previous year. Bronchial affections were the chief cause of admission, but five cases of pneumonia occurred, one of them, at Hong Kong, proving fatal. Diseases of the digestive system were the cause of 233 admissions, equal to an annual rate of 140·1 per 1,000, which is, however, less than that of the previous year by 75·5 per 1,000, and is also below the average rate. No deaths occurred under this head. Dyspepsia caused 78 admissions, diarrhœa 43, dysentery 13, hepatitis 19, simple enlargement of liver 12, and jaundice 6; the decrease in the number of cases of hepatic affection is worthy of notice as compared with the previous year, when 37 cases of hepatitis and 63 of simple enlargement of the liver were returned. Diseases of the urinary system were less frequent, due partly to the reduction in the number of cases of gonorrhœa. Cutaneous affections were a less frequent cause of admission than in the foregoing year; the cases presented no features of interest.

Seven admissions are shown under the head of Poisons, 3 being due to alcohol, 3 to delirium tremens, and 1 to poisoning by dead animal matter; there were no deaths.

The decrease in the number of admissions directly due to intemperance does not, in the opinion of the Principal Medical Officer, Deputy Surgeon General W. A. Thomson, M.B., do much to prove that there is more moderation in drinking amongst the troops, and he thinks that very many of the admissions for dyspepsia, and not a few of those for fevers were due entirely to drink.

The admission rate for *local injuries* is very nearly the same as that of the

previous year. None of the cases call for special mention. No case of *suicide* or *self-inflicted* injury is recorded.

Surgical operations.—At Hong Kong: 1. Amputation of little finger, result satisfactory; 2. A child was born with an imperforate rectum. A dissection was made by Surgeon A. Crick, and the rectum found. Result successful, but the child died three months after the performance of the operation from debility. At Tanglin, by Surgeon Blennerhasset: 1. Operation for stricture of the urethra, with Holt's dilator, result satisfactory; 2. Excision of both tonsils, on account of chronic induration, causing deafness; result, slight improvement; 3. Removal of a large sebaceous tumour from frontal bone; result, satisfactory.

Invaliding.—The number of men sent home during the year was 87, and of men finally discharged the service 34, being in the annual ratios of 52·31 and 20·45 per 1,000 respectively; the former shows a decrease of 1·72, and the latter an increase of 9·31 per 1,000, as compared with the corresponding rates for the previous year; but in comparison with average similar rates for the preceding 10 years there is an increase of 11·35 per 1,000 in the rate of men invalided home, and of 4·26 per 1,000 in that of men finally discharged. The principal causes of invaliding were debility, dysentery, hepatic affections, phthisis pulmonalis, fevers, and diseases of the nervous and circulatory systems; and of final discharge, tubercular diseases, and diseases of the nervous, respiratory, and circulatory systems.

Officers.—In an average annual strength of 89 officers there were 36 cases of sickness. The annual sick rate 404·5 per 1,000 is very slightly in excess of that for the previous year. The principal cases were ague 4, dysentery 4, diarrhœa 4, debility 4, poisoned wound and delirium tremens 1 case of each; 8 officers were invalided. No death occurred in the Command, but one officer invalided died from syncope *en route* for England.

Women.—In an average annual strength of 75 women there were 118 admissions and 2 deaths. The admission rate is three times as large as that of the preceding year. The health of the women stationed at Hong Kong was extremely indifferent, no less than 90 of the cases of illness occurring at that station. The chief causes of sickness were, fevers 25, debility 22, menorrhagia 8, hepatic affections 3, and bronchitis 3. The deaths were due to ulceration of the intestines and debility; both occurred at Tanglin.

Children.— In an average annual strength of 122 there were 113 cases of sickness and 5 deaths; the admission rate, 926·2 per 1,000, and the death rate, 40·98 per 1,000, exceed those for 1881 by 684·1 and 17·54 per 1,000 respectively. The chief causes of sickness were, fevers 14 cases, bronchitis 18, diarrhœa 37, and debility 12 cases. The deaths resulted from convulsions, croup, diarrhœa, and debility.

Sanitary Conditions.—The Principal Medical Officer reports that the general health of the troops in China and the Straits Settlements has been good, and there has been no outbreak of epidemic disease. The accommodation for the troops in barracks and the general sanitary condition throughout the Command has been satisfactory. The clothing has been suitable, and the rations good and sufficient, but "if the beef was varied by an occasional issue of "mutton it would be an improvement."

Referring to the station hospital ship "Meeanee," he remarks that, "each "year confirms my opinion as to the unsuitableness and inadequacy of the "'Meeanee' for the requirements of a station hospital, and the great benefit "which would result from the erection of a commodious and properly con-"structed hospital on shore." He also points out the great need that exists for a hospital for women and children.

The following improvements have been carried out during the year at Hong Kong.

Sanatarium above Wanchai Gap.—One block of barracks completed but not yet occupied.

Wellington Barracks.—Two barrack rooms and one non-commissioned officers' room handed over as casualty wards and inspection room. New water-closets, ablution room, and store room constructed in connexion therewith. Guard-room improved and enlarged by removing a partition wall, and throwing another room into it.

McGregor Barracks.—Ablution room improved.

China and Straits Settlements.

Murray Barracks.—Cook-house arrangements improved.

Station hospital ship "Meeanee."—Ventilation of orlop deck improved by cutting two new bow ports. Ship painted a buff colour instead of black, with a view of reducing the temperature of the wards in the hot season. Water laid on in the surgery. Latrines improved.

It has been recommended that at Kowloon Barracks increased ventilation should be provided by means of ridge ventilators; that the sea bathing arrangements should be improved and a floating bath provided, and that quarters for officers, women, and children should be erected at the Sanatarium above Wanchai Gap. The above are under consideration.

At the Straits Settlements the improvements have been as follows:—

At Tanglin, a reservoir built in connexion with baths, wells repaired and cleaned, and jungle cut down.

At Penang, a commissariat officers' bungalow built near the lines, and the barracks re-roofed, painted, and lime-washed.

Application has been made for the erection of a ward for the treatment of infectious cases.

Asiatic Troops.

The Asiatic troops in the Command consisted of Gun Lascars, who were stationed at McGregor Barracks, Hong Kong.

The average annual strength was 166, the number of admissions into hospital 225, and of deaths 4, being in the ratios of 1355·4 and 24·09 per 1,000 respectively; 2 men were invalided, or 12·05 per 1,000. These rates showed a decrease on the corresponding rates for the preceding year with the exception of the death rate.

Seventy-nine admissions occurred from fever, chiefly ague, which was the greatest cause of sickness. Debility shows 28 admissions, and diseases of the respiratory and digestive systems 18 each.

The deaths were due to anæmia in three cases, and meningitis in one case. Debility was the cause of invaliding in both instances.

Two surgical operations are reported, removal of a fatty tumour from the back, and the removal of a fatty tumour from the thigh; the results were successful in both cases. The sanitary condition of the barracks occupied by the Gun Lascars is reported to have been satisfactory, the rations of good quality, and the water supply good and abundant.

XII.—ON THE HEALTH OF THE TROOPS SERVING IN INDIA.

Sickness and Mortality.

The average annual strength of the non-commissioned officers and men in India was 57,344; the admissions into hospital were 82,415; and the deaths 735, of which 692 took place in India, and 43 (being those of invalids) on the passage to or after arrival in England. The average number of constantly sick was 3806·37. The rates derived from these numbers are, for admissions 1437·2, for deaths 12·82, and for constantly sick 66·38 per 1,000 of the strength. *Bengal.*

The sickness for each of the three commands is shown in the following table:—

—	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Invalids discharged the Service.	Constantly sick.
			In India.	Of Invalids.	Total.			
Bengal - -	36,330	56,513	472	34	506	1,279	501	2537·06
Madras - -	10,817	11,564	114	5	119	321	96	642·45
Bombay - -	10,197	14,338	106	4	110	358	149	626·86
Total - -	57,344	82,415	692	43	735	1,958	746	3806·37
Ten years, 1872—81 -	568,818	835,300	10,302	629	10,931	23,068	8,912	34063·00

continued.

—	Ratio per 1,000 of Mean Strength.					Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
	Admitted.	Died.	Invalided Home.	Invalids discharged.	Constantly sick.		
						Days.	Days.
Bengal - -	1555·5	13·93	35·21	13·79	69·83	25·49	16·39
Madras - -	1069·0	11·00	29·67	8·87	59·39	21·68	20·28
Bombay - -	1406·1	10·79	35·11	14·61	61·47	22·44	15·96
Total - -	1437·2	12·82	34·14	13·01	66·38	24·23	16·86
Ten years, 1872—81 - -	1468·5	19·22	40·55	15·67	59·92	21·87	14·89

I.—Bengal.

The average annual strength of non-commissioned officers and men serving in Bengal in the year 1882 was 36,330, the admissions into hospital numbered 56,513, and the deaths 506, inclusive of those of 34 invalids who died either during the homeward voyage or after arrival in England. The average number constantly sick was 2537·06. The ratios per 1,000 obtained from these numbers are, therefore, for admissions 1555·5, for deaths 13·93, and for average constantly sick 69·83.

Comparing these with the corresponding rates for the previous year a reduction of 93·3 per 1,000 is noticed in the admission rate, and one of 5·28 per 1,000 in the death rate, in the constantly sick rate, however, there is an

Bengal.

increase of 1·79 per 1,000. In comparison with similar rates for the average of the preceding ten years, the admissions and daily sick rates are higher by 44·2 and 8·88 per 1,000 respectively, but the death rate is lower by 6·66 per 1,000.

The average sick time to each soldier was 25·49 days, and the average duration of each case of sickness 16·39 days, the former being longer by ·66 and the latter by 1·33 days than the corresponding periods in the previous year.

It is shown in the report received from the Principal Medical Officer, Surgeon General Sir A. D. Home, V.C., K.C.B., that the increase in the mean daily sick rate is explicable in another way than by the assumption that the cases of illness were of greater severity, and that it is sufficiently accounted for by a change in the mode of preparing the returns on this subject, the figures being now taken from the admission and discharge book instead of from the diet rolls as heretofore; in this way the duration of each admission is lengthened by one day.

The total loss for the year by deaths and final discharge of men from the service was 1,007, or at the rate of 27·72 per 1,000, which is lower than that for the previous year by 5·26 per 1,000.

The sickness and mortality at the chief stations in the command are shown in Abstract XV.

With reference to this table it is remarked in the report from the Principal Medical Officer that "an enormous admission rate," 4258·4 per 1,000, "is "shown for Dera Ismail Khan, but the trifling average strength (under 100) "of this station makes this rate useless for comparison; its death rate was also "large. Restricting comparison to stations at which the average strength "was not less than 100, the highest admission rate is that of Fort Lahore, "3710·7 per 1,000, and with this is conjoined the second highest death rate "(41·32 per 1,000) in the command, which, however, is only fractionally "higher than that of the average of 10 years taken for comparison. Of the "illnesses contributing to the excessive sick rate of Fort Lahore, ague "caused the greatest addition, viz., 2,471 of the whole rate; the death rate "was augmented by the occurrence of cases of sunstroke. The admission rate of "Fort Attock, 3682·8 per 1,000, which is the highest, was also raised by an "excessive prevalence of ague. The two stations which came next in amount "of prevalence of disease are Delhi and Mian Mir; in both there is the feature "of very high admission rates with comparatively low death rates, that for "Delhi being only 8·57 per 1,000 and that for Mian Mir 12·67, or a little "lower than the average for the whole command. In both of the instances "malarial fever caused the excess of the sickness, but the periods of pre-"valence were not the same at the two places, the maximum prevalence at "Delhi being in May and June, the dry, hot months, whilst at Mian Mir "the maximum unhealthiness from this cause was in November, December, "and January, the cold, dry months.

"Of the stations in the plains the results were very satisfactory; in the "instance of Umballa the admissions were fewer in number than the "average annual strength, and the rate is lower by 571·1 per 1,000 than "that of the 10-yearly period. With a very low admission rate, 986·9 per "1,000, Umballa also shows a very low death rate, 9·65 per 1,000, or 3·35 "less than that of the whole command. At Shahjehanpore also the admissions "were fewer in number than the average annual strength, but the death rate, "which fractionally exceeds that of the whole command, is not in con-"formity.

"Excluding stations of small numerical strength, the highest death rate of "the year is that of Sitapur, 67·06 per 1,000. This enormous rate of mortality "was due to a serious outbreak of enteric fever in the men of a corps newly "arrived in the country."

The admissions, deaths, and invaliding in the different classes and orders of diseases are shown in Abstract XIV., and the prevalence and mortality of the different classes of diseases in each of the military divisions in the command in Abstract XVI.

General Diseases.—Including both groups of this class the admission rate 817·5 per 1,000, and the death rate, 6·25 are lower than the corresponding rates of the previous year by 84·5 and 2·17 per 1,000 respectively.

In the *febrile group* the number of admissions was 24,024 and there were 187 deaths, the rate of admissions, 661·2 per 1,000, and that of deaths, 5·15 per 1,000, being less than in 1881 by 78·9 in the former and 1·73 in the latter case.

The highest admission rate for febrile diseases during the year is that of the Gwalior division, which reaches 1442·0 per 1,000, and is higher than that of the previous year by 482·0 per 1,000. Next comes the Lahore division with a rate of 1266·5 per 1,000, an increase of 157·3 on the preceding year, and then the Peshawar division, which though at the head of the list of prevalence of febrile diseases in 1881, now shows an admission rate of 1249·6 per 1,000, being a decrease of 409·2. In all the remaining divisions a decrease has occurred in the admission rate of these diseases, varying from 428·4 per 1,000 in the Presidency district to 46·6 per 1,000 in the Saugor division. The lowest admission rates for the year are found in the Sirhind, Rohilcund, and Presidency divisions, being 384·3, 308·0, and 326·3 per 1,000 respectively. With lower admission rates, lower death rates are seen in the instances of the Presidency, Saugor, Meerut, Sirhind, and Rawal Pindi divisions, but higher admission rates with higher death rates in the Allahabad, Oudh, and Peshawar districts. The highest death rates are noticed in the Oudh and Allahabad districts, being 18·60 and 11·59 per 1,000 respectively, and the lowest in the Saugor and Meerut divisions. 1·45 and ·59 per 1,000. It is stated that, speaking generally, the influence of enteric fever prevalence is shown in the augmented rates of mortality.

Eruptive fevers.—The admission rate of these fevers, 1·7 per 1,000, is less than half that of the preceding year, when dengue was prevalent in certain districts. Out of a total of 64 admissions 38 were due to small-pox, and 4 of the cases were fatal. The cases were scattered over various stations; Lucknow had 13 cases, Agra 5, Bareilly 4, Peshawar 2, Meerut 3. The Principal Medical Officer remarks that "in 1881 only 5 admissions for small-pox took "place in the whole command. The sudden rise in 1882 was the beginning "of the epidemic now in progress, due to succeed, on the prevalence of the "disease sinking to the zero of 1881." Scarlet fever caused but a single admission, measles shows 17 cases, and dengue 3.

Continued fevers.—The admission rate for these diseases is 116·7 per 1,000, less than that for the preceding year by 60·1 per 1,000. The rate of prevalence is fractionally increased in the Allahabad division, is increased by 102·5 in the Saugor district, and by 20·1 per 1,000 in that of Rohilcund. In all the remaining divisions the reduction in the rate is considerable, amounting in the case of Peshawar to 280·0 per 1,000, in that of Lahore to 192·4, in that of Oudh 131·3, and in that of Meerut 102·7 per 1,000. The rate of mortality in Allahabad is nearly three and a half times higher than in 1881, and is due to the greater prevalence of enteric fever. In the Saugor district there is seen a greatly diminished rate of mortality, and the explanation is the converse of that given for the first-named division. In Oudh there is an increase in the death rate due to the same cause, and throughout the comparisons enteric fever determined the increase or decrease of the death rate in the particular divisions.

Enteric fever.—The number of admissions in the command was 268, and of deaths 103, being in the annual ratios of 7·4 and 2·83 per 1,000 respectively as against 6·5 and 2·80 in 1881. The rate of prevalence is ·9 per 1,000 higher than in the preceding year. The rate of mortality to cases treated, 384·33 per 1,000, is less by 45·38 than in the previous year, but is still very high.

In Abstract No. XVII. will be found a table taken from the report of the Principal Medical Officer, showing the stations in the command at which the admissions and deaths took place in each of the four quarters of the year. Referring to this table, the Principal Medical Officer remarks that "as in 1881, "so in the year under report every division returns cases of this form of fever, "and cases occurred at every station except 13. There were two outbreaks "of exceptional severity, one at Sitapur in the Oudh division, and one at "Cawnpore in the Allahabad division. At Lucknow the prevalence of this "fever was, as is normal, large, but the outbreak has had less the character "of an epidemic than that of a general prevalence among the large body of "men quartered there."

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In every period of the year there have been cases of enteric fever, and, as in the previous year, the second quarter of the year shows the highest number of admissions, the third quarter next, followed by the first and second quarters. In other words, the period of greatest activity was the hot season, and the least the cold season, the rainy season being in an intermediate position.

The highest number of admissions and deaths in any division occurred in that of Oudh, the former numbering 82 and the latter 32; next comes Allahabad with 37 cases and 21 deaths, followed by Rohilcund with 25 cases and 8 deaths, and three other divisions with lesser numbers. The lowest number of cases in one division was 6 in the Presidency (3 of them fatal), Peshawar being next above, with 13 admissions and 6 deaths.

Referring to the outbreak at Sitapur, Sir Anthony Home remarks that "it was one of etiological interest and also of practical importance from "its extent," and of it, as well as of the outbreak which occurred in Cawnpore, he gives an account, of which the following is an abridgement:—

"The garrison of Sitapur, at the time of this occurrence of enteric fever, "consisted of a half battalion of the Lincolnshire regiment, which corps had "disembarked at Bombay on the 28th January 1882, its previous station "having been Gibraltar; a draft of 97 men had come straight from England "in the troopship which at Gibraltar embarked the head quarters of the regi- "ment for passage to India.

"It is presumed that the men of the draft, those of the service companies, "and also the women and children, embarked in perfect health, and it is not "known that any enteric fever case had previously existed among them; and "there is no record of the occurrence of enteric fever amongst other bodies of "men embarked on the same troopship on this voyage. On disembarkation, "after having remained a few days at Deolali, where it was reported quite "healthy, the regiment proceeded by wings up country, on different days, by "railway, one wing to Benares and the other to Lucknow; as far as Allahabad "both wings were quartered in the same rest camps at night, but successively "and at intervals of two days. On the 6th the right wing left Allahabad for "Lucknow. On arrival there it proceeded by route march to Sitapur, arriving "on the 13th.

"During the progress of this wing from Deolali to Lucknow the men were "healthy, but it is reported that one man was transferred to hospital at the "latter place suffering from tonsillitis, and that of the five men sent to "hospital on arrival at Sitapur three of them were suffering from tonsillitis, "and one from simple continued fever. Both of these illnesses are of signifi- "cance; nothing is more frequent than the connexion in time between a pre- "ceding tonsillitis and a following enteric fever illness. Leaving out of view "the question of the connexion between them, the occurrence of these cases is "sufficient, in the judgment of the writer, to give grounds for assuming that "the outbreak of enteric fever which soon occurred in the men of the wing at "Sitapur was in causation due to something not intrinsic to that station; "but the fact must be stated that an admission for enteric fever had occurred "in the end of January, in the case of a man of the corps relieved by the wing "of the Lincolnshire regiment. The outbreak in the latter dates from the "23rd February, on which day a man was admitted with an illness sup- "posed to be simple continued fever, but which afterwards proved to be "enteric fever. The epidemic terminated in the week ending 9th June. "After this there were no admissions for enteric fever until the end of Sep- "tember, when one took place; another occurred in the first week of "October; these two cases are not associated with the particular outbreak "under notice, though they may be related to the same epidemic.

"During the outbreak there were 43 admissions for enteric fever; the ad- "missions for simple continued fever were also very numerous, and from the "fact that 19 of them were afterwards ascertained to be enteric fever, it is "certainly doubtful whether the 43 recorded cases are more than approximate "to the actual number of the cases. It has been stated that the men amongst "whom the outbreak occurred had been stationed at Gibraltar before embark- "ing for India; this makes it possible to compare the relative incidence of "enteric fever in a body of men inured to heat and that in a body of men not "so inured; this being possible from the fact that the whole of the men of "the draft were included in the half battalion at Sitapur. It is found, that

"the men previously accustomed to heat suffered in the rate of 103·4 per 1,000 of strength, being one in every 9¾ men, whilst those unaccustomed to heat suffered in the rate of 175·3 per 1,000, being one in every 5¾ men. Perhaps this disproportion would have been less had the ages of the men of the draft not averaged a little lower than that of those of the other men.

"As bearing on the etiological aspect of this particular outbreak it will be interesting to contrast the sickness accruing in the other half battalion of the regiment at Benares. From the date of arrival until the last week in June the health of this wing was excellent, and this period of time was that of the outbreak at Sitapur. At Benares not only was enteric fever absent, but, moreover, only two admissions for simple continued fever took place in the whole garrison; the significance of this, of course, being that it strengthens the supposition that the absence of enteric fever was genuine. In the week ending 1st July, however, two admissions took place in the wing at Benares, in the week ending 4th August another, and in the succeeding week a fourth and last admission occurred. As the case stands, therefore, this small outbreak of enteric fever (the proportion of which was 13·9 per 1,000 or one in every 72 men) was disassociated in point of time from that of the outbreak at Sitapur; it occurred when the latter had terminated; consequently the history of the two outbreaks which do not synchronize, and which are not comparable in severity, goes to show that the theory of the action of heat as exciting enteric fever in young men newly arrived in India is not supported. On the other hand, the theory which attributes the occurrence of this disease to a poisoning by specific matter derives at least negative support from the history of the first outbreak, whether this depended on a poisoning acquired in the rest camps or one affecting them at Sitapur.

"The other especially severe outbreak of enteric fever was that occurring at Cawnpore, and in one particular body of men of the garrison (the Scottish Rifles).

"In an important respect this outbreak presented a feature, the converse of that noted in the Sitapur outbreak; its incidence was in a body of men who had been stationed at Calcutta for two years and four months (and who by residence were therefore inured to heat); during that time no enteric fever appeared among the men. The battalion was transferred to Cawnpore on the 9th February and the first case of enteric fever was received into hospital in the week ending 24th February, the last in the week ending the 30th June. It will be noticed that this outbreak was parallel in time with that at Sitapur, beginning almost on the same day, though terminating a fortnight later. This circumstance has a very peculiar interest; the Oudh and the Allahabad divisions are conterminous, and the two stations are on lines of latitude only about 80 miles apart; there is thus in this year the feature of an epidemic affecting a circumscribed locality in which are situated the stations where occurred nearly the whole of the worst outbreaks, in point of numbers, which are shown in Abstract No. XVII., namely, Sitapur, Lucknow, Shahjehanpore, Ranikhet, Cawnpore, Allahabad, and Fyzabad. These stations give 462·7 per 1,000 of all the cases returned on the year, and the rate of prevalence in the assumed epidemic area is 18·5 per 1,000 of the strength, whilst in the whole of the rest of the command it is only 7·38.

"The distinctive feature of the outbreak at Cawnpore was its restriction to the men of the Scottish Rifles, the officers, women, and children of the regiment escaping, and also the Royal Artillery. In the battalion also the incidence was most unequal; the men were quartered by companies in separate barrack blocks arranged in an echelon line running from north-west to south-west, and, so far as can be ascertained, not a single other discriminating difference than this of lodging was to be found, the ages of the men of the several companies, if not in a close average, were not strikingly dissimilar; if certain companies contained a large number of men who had suffered from enteric fever in their recent previous service in South Africa, and had thus exhausted their comparative susceptibility to attack, the fact could not be brought out with such certainty as to justify the assumption that the difference in the rates of attack in the various companies was consequent on this circumstance. At the northernmost end of the line No. 1 barrack block was unoccupied by the troops, the accommodation was not

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" required, and its history in relation to cholera (it being often the first build-
" ing in which the disease appeared in an epidemic) gave it a reputation for
" general unhealthiness, causing it to be left untenanted when possible. The
" eight companies of the battalion (from A to H) were lodged in the remaining
" barrack blocks. 'A' company was lodged in No. 2 block, the next to the pre-
" sumedly unwholesome one, the remaining companies being lodged in the
" other blocks in order. Ten out of the 18 admissions during the outbreak
" were from 'A' company in No. 2 block and seven of the 11 deaths. The
" remaining admissions and deaths were scattered over the remaining blocks.
" The excessive unhealthiness of 'A' company in No. 2 block is most apparent
" as judged of by the evidence of cases of illness arising in it, whether called
" enteric, remittent, or simple continued fevers. In a special report received
" in connexion with the occurrence of this outbreak, its causation was traced
" to various agencies; some of these, such as a water-logged state of some
" neighbouring grounds, might be potent in the production of paludal fever.
" Others, again, such as the bad ventilation of No. 2 block and the proximity
" of an old cemetery might conceivably induce some form of typhus fever, but
" no cause capable of originating the specific enteric fever in that block was
" suggested. It should be remarked that all the barrack blocks are two storied,
" and that in No. 2 block of 10 admissions nine were those of men lodged in
" the upper story."

The Principal Medical Officer calls attention to the fact that in the year under report enteric fever has been comparatively not infrequent among the sepoys of the Native Army, 20 admissions with 12 deaths having occurred; these happened in 13 different regiments and 12 different stations, and the cases appear to have been undoubtedly genuine. He remarks that it may be objected that this proportion of attacks is quite insignificant, but it should be recollected that it is not very long ago since authorities asserted that enteric fever was never seen in India; and that in the year 1865 only 12 admissions were returned as having occurred in 37,631 European troops in Bengal.

With regard to simple continued fever and febricula, a decrease has occurred in the admission rate, as compared with the previous year of 35·9 and 25·0 per 1,000 respectively.

Paroxysmal Fevers.—The number of admissions for these fevers was 19,467 and there were 29 deaths. The admission rate is 535·8 per 1,000, a decrease on that of the former year of 15·0 per 1,000, which rate was also considerably less than that of the year preceding. The death rate, ·80 per 1,000, shows only a fractional decrease on that for 1881.

The highest admission rates (except that of the Punjab Frontier, where the strength was only 89) were at Gwalior and Lahore, 1398·3 and 1201·0 per 1,000 respectively. The lowest admission rates for these fevers are found in the Sirhind and Rohilcund divisions.

There was a decrease of prevalence of these fevers in the Presidency amounting to 316·8 per 1,000, or considerably more than half, in the Allahabad division a diminution of 115·5 per 1,000, in that of Saugor 138, Rohilcund 96·7, Meerut 112·3, Sirhind 141·0, Rawal Pindi 127·2, and Peshawar, 127·6 per 1,000. The admission rates are higher than in 1881, for Oudh by 8·2 per 1,000, for Gwalior by 495·5, for Lahore by 380·3, and for troops on the Northern Frontier by 224 per 1,000. The Principal Medical Officer calls attention to the fact that men quartered in the various forts are exceptionally liable to suffer from paroxysmal fevers. All the forts except that of Lahore have in common the features of situation close to the bank of a river and of buildings crowded on a small area of ground. That of Allahabad is the only fort in this year under report in which, with the above insanitary conditions, the prevalence of paroxysmal fevers is not excessive.

Cholera.—The admissions for cholera were 73 in number, and deaths 45 being in the annual ratios of 2·0 and 1·24 per 1,000 respectively, both being less than half of the corresponding rates for the previous year.

In Abstract No. XVIII. is given a table showing the stations in the command at which the admissions and deaths from cholera took place in each of the four quarters of the year 1882. The majority of the cases, 58 with 39 deaths, occurred in the third quarter of the year, six cases and three deaths in the first, five cases and two deaths in the second, and four cases and one death in the fourth quarter. In the Oudh division there was the greatest prevalence of the disease, 44 cases and 30 deaths having occurred; 29 cases and 20 deaths

happened at Fyzabad, 12 cases and 8 deaths at Lucknow, and the remainder at Sitapur. The next division in point of numbers affected was Allahabad, in which 17 cases and 10 deaths occurred, 11 cases and 6 deaths being at Benares; the Presidency shows 4 cases and 1 death, the Meerut division two cases, Rohilcund, Saugor, and Gwalior one case each, and 3 cases occurred among troops on the march. The Principal Medical Officer brings to notice that with the exception of 5 cases occurring at Saugor, Gwalior, Bareilly, and Agra, every admission occurred at a station east of the 80th degree of longitude. *Bengal.*

Other febrile diseases caused anadmission rate of 5·0, and a death rate of ·11 per 1,000, the cases were principally erysipelas and influenza.

Diseases of the Constitutional Group.—Rheumatism.—The admission rate for affections under this head, 36·0, per 1,000, is almost identical with that of the preceding year; there was no death. The variations in the rates of prevalence in the different divisions are unimportant.

Syphilis.—The primary form of this disease caused an admission rate of 86·4 per 1,000, which is less than that for 1881 by 7·6 per 1,000. For the secondary form the rate was 21·8 per 1,000 identical with that of the previous year.

Including gonorrhœa and its sequelæ, the admission rate for all forms of venereal disease was 236·2 per 1,000, an increase on that of the former year of 7·0 per 1,000. The rate of inefficiency from these diseases is equal to 17·00 per 1,000, an increase of 2·48 on that of the year 1881.

The rate of prevalence for primary syphilis shows a reduction in the Sirhind division of 41 per 1,000, in the Allahabad division 23·9, Meerut 29·1, Rawal Pindi 15·3, and Peshawar 22·2 per 1,000. The rate is higher for Saugor by 10·1, Rohilcund by 58·8, and for Lahore by 2·9 per 1,000. For secondary syphilis the rate of prevalence is markedly lower for Sirhind and Saugor, and higher in the Peshawar division, in other divisions the rates of the two years are wonderfully close.

Tubercular Diseases.—263 admissions and 36 deaths, including those of invalids, are returned, giving an admission rate of 7·2 per 1,000, fractionally greater than the rate of the previous year, and a death rate of ·99 per 1,000, similarly less than in 1881; 224 of the admissions and 33 of the deaths were caused by phthisis pulmonalis. The distribution of these diseases in the various divisions is unimportant, owing to the small numbers included.

Scurvy and Purpura caused a fractional rate of admission, and one death occurred from purpura. *Other diseases* of this group caused 153 admissions and 2 deaths, or 4·2 and ·06 per 1,000 respectively, the former greater and the latter less than in 1881. The cases were all due to anæmia, with the exception of three of cancer, two of diabetes, and one of general dropsy. The deaths were due to cancer in both cases.

Local Diseases.—*Diseases of the Nervous System.*—A fractional decrease is noticed in both admission and death rates for these diseases, the former being 17·7 and the latter 1·16 per 1,000. The principal causes of admission were neuralgia, mental disease, epilepsy, sunstroke, and apoplexy. Sunstroke, however, shows a marked decrease, 74 cases being returned against 154 in the previous year; there were 30 deaths from this affection; the remaining deaths were due to apoplexy 4, meningitis 3, white softening of brain, fibrous tumour of brain, and paralysis, of each one case. Diseases of this class show a diminished prevalence in the Presidency by 11·3 per 1,000, for Lahore by 15·8 or more than half, and for Saugor, Meerut, Sirhind, Peshawar, and Rawal Pindi by lesser numbers, but an increase is observed for Allahabad, Gwalior, and Oudh, the latter amounting to 13·0 per 1,000, or one and a third times greater. A decrease in the death rate has occurred in most of the divisions, most marked in that of Lahore. Adverting to the increase in the admission rate for mental disease, ·57 per 1,000, the Principal Medical Officer remarks that "the signi-
" ficance of the increase in the case of mental disease on a previously high rate
" of prevalence of those affections (1·91 per 1,000) amongst young and carefully
" selected men is lost in an arithmetical statement in fractional proportions;
" it may perhaps be better brought out by an illustrative comparison, an increase
" of ·57 per 1,000 men means that 21 more men (nearly) were attacked with
" mental disease than in equal numbers would have suffered in this way in
" 1881. In Table III. of the Report of the Commissioners in Lunacy for
" 1882 certain data are given from which the relative amounts of insanity

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" in the general population of England accruing during the year 1881 and " that of the population with which this statement is concerned may be com- " pared. The admissions into asylums, &c. in England for mental disease " were in the rate of ·52 per 1,000 of the male population, while the rate of " admission for mental disease (in the army of Bengal) in 1882 is 2·50 per " 1,000, or more than four and half times greater."

Diseases of the Eye, Ear, and Nose caused admission rates of 15·1, 12·6, and ·5 per 1,000 respectively, each of them shows a slight increase over the corresponding rates for the previous year. The rate of prevalence for eye diseases is lower in the Saugor, Sirhind, and Lahore divisions, but higher in all the others, especially Rawal Pindi, where it is double.

Diseases of the Circulatory System have caused an annual admission rate of 16·7, and a death rate of ·49 per 1,000, both fractionally less than the similar rates in the year 1881; 417, or more than two thirds of the admissions, were due to palpitation, cases of which, however, have been less frequent than in the former year. Valvular disease caused 82 admissions, and aneurism 9; 18 deaths occurred, of which 15 were due to cardiac affections, 2 to aneurism, and 1 to rupture of the mesenteric veins; this latter case occurred in Umballa, in a man suffering from a severe form of remittent fever, *post-mortem* examination showed extensive disease of the mesenteric glands, and a large clot of venous blood in the abdomen.

The variation of prevalence of these affections in the different divisions as compared with the previous year is as follows:—a decrease in Presidency, Allahabad, Rohilcund, Saugor, Sirhind, Lahore, and Peshawar, and an increase in the remaining circles; in none were the changes of any great extent.

Diseases of the Absorbent System show a decrease of admission rate of 1·5 per 1,000; of 683 admissions 630 were due to inflammation of the inguinal glands. With the exception of Oudh, Rohilcund, and Gwalior, there is a decrease of admission rate in the different divisions.

Diseases of the Ductless Glands.—19 admissions are returned under this head, 17 on account of goitre; they all occurred at the station of Ranikhet. In the report of the Principal Medical Officer it is stated that the station at an average elevation of 6,000 feet " occupies the summit and sides of a plateau, the valleys " in proximity being very deep; the soil is composed of a disintegrated mica " schist; the water supply derived from the rainfall on the neighbouring hills " is said to be soft and pure, its permanent hardness being 3 degrees, and the " total solids per gallon 7·72, of which lime contributes 2·88 grains. The " natives of this district (Kumaon) are very subject to malarious fevers and " occasionally to a formidable infectious fever, having a resemblance to bubo " plague; they suffer exceptionally from calculus, and goitre is endemic " amongst them. Goitre appeared amongst the men of the battalion in 1881, " the admission rate per 1,000 being fractionally lower than in the present " year."

The disease was not confined to any particular period of the year or to any barrack or company. The cases were all cured by the local application of biniodide of mercury. At Choubuttia, three miles off on the same range, no case of goitre occurred.

Diseases of the Respiratory System.—The number of admissions was 1,903 and of deaths 33, including 3 of invalids. The annual admission rate 52·4 per 1,000 is 6·8 less than in 1881, and the death rates ·91 per 1,000 less by 1·11. The decrease in prevalence was in bronchitis, pneumonia, and pleurisy, and the decreased mortality is due to the lessened prevalence of the two latter affections. Of the total number of deaths 29 were due to pneumonia.

A decrease in admission rate is observed in the Peshawar district of 56·3, or less than half, Meerut, 28·1; Saugor, 19·0; and Rohilcund, 14·4 per 1,000, as well as Sirhind and Allahabad with smaller numbers; an increase is noticed in the Presidency by 20·0; Oudh, 16·3; Gwalior, 11·2; Lahore, 17·6; and Rawal Pindi, 4·6 per 1,000.

Diseases of the Digestive System.—7,875 admissions and 107 deaths, including 12 of invalids; give the respective annual rates of 216·8 and 2·94 per 1,000, showing a decrease on the similar rates for the previous year of 12·9 and 1·14 per 1,000 respectively. The principal cases were diarrhœa 1,707, with 2 deaths, dyspepsia 1,530, throat affections 1,026, dysentery 952, and 32 deaths,

hepatitis 836 and 9 deaths, abscess of the liver 43, with 40 deaths, and abscess of the liver associated with dysentery 8, and 7 deaths. *Bengal.*

Compared with the rates for 1881, that for Saugor is lower by 58·1 per 1,000, for Meerut by 62·2, for Sirhind by 34·5, for Lahore by 14·7, for Rawal Pindi by 43·7, and for Peshawar by 6·6 per 1,000; the rates are higher for the remaining circles, especially in Allahabad and Oudh, where the increase is 39·1 and 56·0 per 1,000 respectively.

Abstract XIX. contains a statement of the prevalence of dysentery, diarrhœa, and hepatitis in each of the divisions of the command, and the deaths caused thereby; and Abstract XX. shows the prevalence of and mortality from the same diseases in each quarter of the year.

Diseases of the Urinary System.—Admissions due to gonorrhœa and its sequelæ numbered 4,653, equal to an admission rate of 128·0 per 1,000, being an increase of 14·6 on that for the previous year. One death occurred from stricture of the urethra. The rate of prevalence was higher in all the divisions, except Allahabad and Sirhind, the increase being considerable in the instances of Rawal Pindi and Saugor. The remaining diseases in this class caused 297 admissions, and 8 deaths, including that of an invalid, the rates per 1,000, 8·2 and ·22, are almost identical with those for 1881. Five of the deaths were due to Bright's disease.

Diseases of the Generative System gave an admission rate of 10·7 per 1,000, slightly less than in the former year; a death occurred from gangrene of the penis.

Diseases of the Organs of Locomotion show a fractional decrease, the rate of admission being 5·0 per 1,000; psoas abscess caused one death. *Diseases of the cellular tissue* with a rate of prevalence of 18 per 1,000 show a fractional increase. *Diseases of the cutaneous system* show a rate of admission of 72·4 per 1,000, equal to a decrease of 5·6, which is said to have been caused principally by the diminished prevalence of ulcers and of boils: the prevalence of some other affections (notably that of tinea) was considerably augmented. The rate of admission is lower than that of the preceding year in every division except Lahore.

CONDITIONS, &c.—The rate of admission for *debility*, 30·7 per 1,000, shows a decrease of 4·7. Two deaths are returned, one occurring in an invalid on passage home.

POISONS.—179 admissions and 4 deaths are returned, the rate per 1,000 of the former, 4·9 being an increase of 1·2, and of the latter ·11, a fractional decrease. The number of admissions for alcoholic poisoning was more than double that for 1881, and delirium tremens was also proportionally more common. Two cases of snake bite occurred, one of which ended fatally, the species of snake causing death was undiscovered; in the other the man was bitten on a finger by a cobra; it is stated that the treatment was that of supporting the strength by ammonia and injecting a solution of permanganate of potash into the punctures. A fatal case of poisoning (suicidal) was due to taking carbolic acid. A case of oxalic acid poisoning occurred, and recovered.

INJURIES, GENERAL.—Ten cases were admitted, 5 being due to burns and 5 to multiple injury; 17 deaths took place out of hospital, one from multiple injury and 16 from drowning, 15 of the latter being accidental and one suicidal.

3,900 admissions and 45 deaths, or 107·4 and 1·24 per 1,000, were due to *local injuries*, the admission rate is higher than in the year 1881 by 8·4, and the death rate by ·38 per 1,000. The admissions were due to various causes, principally, as usual, to sprains, wounds, contusions, and fractures, &c. Of the deaths 11 were due to concussion of the brain or fracture of skull, 3 to other fractures, 5 to wounds, 23 to gunshot wounds, 1 to dislocation, and 2 to rupture of the spleen. Three of the deaths from gunshot wounds were homicidal, and 17 were suicidal, 1 death from fracture of skull was homicidal, and four of the deaths from injuries from wounds (cut throat) were suicidal, all the remaining deaths in this class being the result of accident. In all there were four cases of *homicide* and 23 of *suicide*. Regarding the latter the Principal Medical Officer, referring to the occurrence of 17 from gunshot, remarks, "that it is "a proportion which indicates the resolve to commit suicide had a connexion "with the constant sight of means appropriate for effecting it; it is also "evident that the suicidal temptation was connected with season; 15 of the

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"suicides occurred in the five hot months from May to September inclusive, "whilst in the five months from October to February inclusive there were "only four suicidal deaths."

Surgical operations.—The following successful operations are reported. A case of amputation at the right shoulder joint, one of amputation of the fore-arm, three of amputation of single fingers, and one case in which amputation of different parts of the four fingers of the left hand was necessary from the effects of gunshot wound; removal of necrosed bone from tibia, one case; removal of tumour from breast, three cases, and from back two cases: herniotomy, stricture of urethra, extraction of bullet, of each one case; fistula in ano, three cases, and other minor operations.

The following were attended with fatal results: Laryngotomy one case, in which the man was dying from snake bite; trephining one case, for depressed fracture of skull, aspiration of the liver, three cases; and paracentesis vesicæ, through the rectum, one case. In this the operation was only palliative, as extravasation of urine took place from rupture of urethra behind an old stricture.

Invaliding.—The number of invalids sent home was 1,279, being at the rate of 35·21 per 1,000, which is less than the similar rate for the previous year by 2·00, and than that for the average of 10 years by 2·89 per 1,000. The principal causes of invaliding were debility 308 cases, or at the rate of 8·48 per 1,000, cardiac affections and aneurism 152, or 4·18 per 1,000, hepatic diseases 133 or 3·66 per 1,000, phthisis pulmonalis 101 or 2·78 per 1,000, dysentery 40 or 1·10 per 1,000, and mental diseases 48 or 1·32 per 1,000. There is a decrease in invaliding from fever, particularly from the paroxysmal form, the rate being only ·96 per 1,000. A fractional increase is observed in the rates of invaliding from secondary syphilis and tubercular disease, and also in those from diseases of the nervous and circulatory systems; in nearly all the other orders a decrease has occurred.

The number of men finally discharged during the year was 501, the annual rate per 1,000 being 13·79. This is almost identical with the corresponding rate for 1881, but is less than that of the average of 10 years by 1·59 per 1,000. The principal causes of discharge were diseases of the circulatory system, 105 cases, or 2·89 per 1,000, followed by disorders of the digestive system 73, or 2·01 per 1,000, debility 62 or 1·71 per 1,000, tubercular diseases 55 or 1·51 per 1,000, respiratory affections 45 or 1·24 per 1,000, and various other causes with fractional rates.

Officers.—The average annual strength of officers was 1,141. The number of attacks of illness was 990, giving the annual sick rate of 867·6 per 1,000, which is higher than the corresponding rate for the previous year by 29·9 per 1,000. 16 officers died in India, being at the rate of 14·02 per 1,000. Four officers belonging to the command also died from unknown causes, out of India. One officer was attacked by small-pox; 26 suffered from enteric fever, at the rate of 22·8 per 1,000, as against 7·38 per 1,000 for men, the deaths from enteric fever numbered three; fevers, especially ague, caused a large number of attacks of illness; four cases of cholera are shown, three being fatal, and three fatal cases of pyæmia occurred; dysentery, diarrhœa and hepatic affections were the cause of a good deal of illness, and two cases of hepatic abscess proved fatal; the remaining deaths were due to Bright's disease, homicidal, gun shot wound, sunstroke, valve disease of heart, and simple enlargement of the liver, of each one case; 69 officers were invalided, or at the rate of 60·47 per 1,000, being an excess of 2·70 per 1,000 on the invaliding rate for the previous year. The invaliding was due to fevers in 23 cases, nine of them being enteric, in 10 instances to debility, 5 to hepatic disease, 6 to diarrhœa and dysentery, 6 to injuries, 3 to respiratory diseases, 3 to rheumatism, 2 to mental disease, and the remainder single cases to various causes.

Women.—The average annual strength was 2,040, and there were 2,435 admissions into hospital. Of these, however, 582 were due to childbirth, reducing the number of admissions for sickness to 1,853, or 903·9 per 1,000, being less than the corresponding rate for the previous year by 85·4 per 1,000.

The deaths, 41 in number, give a rate of mortality 20·10 per 1,000, which shows a decrease of 6·26. Eruptive fevers caused 16 admissions, of which 9 were due to small-pox; 5 cases of enteric fever occurred, of which one was fatal. Nearly one quarter of all the admissions were due to malarious fever.

One death occurred from ague and three from remittent fever. Cholera attacked 4 women, of whom 3 died. Five women were attacked with puerperal fever, all fatally. The Principal Medical Officer calls attention, in referring to the comparatively high rate of admissions for conjunctivitis, to the probability of the increased prevalence among women as compared with men, being due to the fact that from attendance on and nursing sick children they are more liable to infection. The same remark applies to the greater prevalence of eruptive fevers. The remaining deaths were due to phthisis 5, anæmia 1, convulsions 1, valve disease of heart 3, dysentery 4, enteritis 1, diarrhœa 4, hepatitis, 1, abscess of liver 2, enlarged spleen 1, hœmorrhage 1, abortion 1, debility 2, and rupture of uterus 1. *Bengal.*

Children.—The average annual strength was 3,596; the admissions were 2,270 and deaths 181, being in the annual ratios of 631·3, and 50·33 per 1,000, the decrease in the former being equal to 109·3, and in the latter 9·74 per 1,000, as compared with the corresponding rate for the year 1881.

Eruptive fevers were prevalent, at the rate of 26·9 per 1,000, as against 1·8 per 1,000 in the instance of the men, and 7·40 in that of the women.

Enteric fever caused three admissions, all recovered; paroxysmal fevers were prevalent at the rate of 100·1 per 1,000; cholera caused 4 admissions, all fatal; and erysipelas 5 cases, one being fatal. Of 35 admissions for convulsions there were 30 deaths, and one child died from hydrophobia. Eye affections caused 355 admissions, or 98·7 per 1,000, as against 15·1 per 1,000 in the instance of the men; 15 deaths occurred out of 163 admissions for teething. Respiratory affections caused 18 deaths, dysentery 8, diarrhœa 35, premature birth 7, debility 10, fevers 18 (including small-pox 1), tabes mesenterica 8, meningitis 4, sunstroke 1, hepatic affections 2, intussusception, abscess, burns, drowning, and concussion of the brain 1 each.

Sanitary Conditions.—The Principal Medical Officer, reports that "the "general health results in the force in the command in 1882 have been "satisfactory; fewer men have been taken into hospital and fewer have "been invalided than in the preceding year, whilst the death rate (of men "dying in the command only) is very favourable, being 5·03 per 1,000 "men lower than that of 1881, and 6·55 per 1,000 lower than the rate "of the average of the 10 previous years. Although the fluctuations in "the health of the troops from year to year are chiefly consequent on the "great meteorological phenomena which differentiate one year from another, "and the limits within which human agency can affect the health results may "be narrow, it is reasonable to believe that some of the good results in the "present year may be attributed to the continuous application of the systema-"tised means used for the sanitary well-being of the lodging of the men, of "the wholesomeness of their food, of the suitability of their clothing, and of "the relation of their duties to times and seasons, of the provision of rational "amusements for them, of their withdrawal from infected quarters when these "have given evidence of unhealthiness during the visitations of the most "formidable epidemic illnesses, and often temporarily locating the very young "and weakly men in cool hill climates during the heat of the plains."

"All the measures succinctly enumerated above were carried out, it is "believed in the main with care, at the various stations of the command during "the year.

"As a short detail of the defects or deficiencies noted in the reports of "medical officers is given below, it will be enough here to advert generally to "some of the matters treated of specifically in the reports in question.

"*Quarters.*—Speaking generally, the lodging of the men is commodious "and is in good order. Assuming the necessity for their lodgment in common, "it is not apparent how, at a cost within reach, the internal arrangements of "the barrack rooms could be better planned, or the accessory accommodation "be more convenient than that existing. More men may be occasionally be "put into a room than the regulations as to space justify, but by the recently-"adopted plan of numbering the cot spaces for which the rooms are measured, "any material crowding will now at once be evident, and will compel atten-"tion. The great heat experienced in summer in the high Punjab makes it "desirable that the tiling of the flat-roofed barracks there should be supple-"mented by some kind of ceiling where this is wanting, such as one got by "leaving an interstice between two layers of tiling: the sun strikes through a

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" single tile, however thick, and the rooms (though these are lofty) are distressingly hot. Nowshera is the station at which the effects of an insufficient roof protection are most complained of.

" *Food.*—The ration of the soldier in this command is large in apparent amount, but it is doubtful if he is well nourished by it; the extent to which the men buy canteen food may fairly be taken as evidence that the ration is not a good one.

" It would be worth consideration whether an allowance of 12 oz. of properly fed and succulent meat could not be given for the same cost to Government, as the present allowance of 16 oz. of under-fed, tastleless, poorly nourishing meat. Scurvy prevails among the men to a degree respecting which the returns of sickness give no notion; the vegetables ordinarily used have but little antiscorbutic effect. The remedy for this matter is, that the local authorities should procure the cultivation of successive crops of different vegetables of a proper quality, so that the slightly antiscorbutic nature of the class of vegetables which can be grown shall not be further impaired by age.

" *Water supply.*—At Ranikhet the prevalence of goitre amongst the men is, perhaps, some would say, most probably due to the use of water impregnated with certain minerals: but, except in this, no undisputed cases in which illness has been consequent on the use of impure water have occurred during the year, though it is the fact that the water supply of one particular station has been condemned in the judgment of medical officers, but, as I think, on purely speculative considerations. The propriety of procuring an abundant and a constant supply of water for the important station of Allahabad is a matter deserving of attention, though not one of pressing urgency. The supply of water at the hill station of Choubattia was insufficient during part of the year; at other hill stations this first necessary of life is sparingly distributed, owing to the expense of its carriage from lower levels than those on which the stations are placed. The desirability of increasing the supply, and at the same time of getting water of the best quality at hill stations, is admitted, and the means for effecting this are ready to hand. The water now used is the rainfall, which is liable to contamination from surface impurities; it also becomes mixed with more or less hurtful mineral salts present in the soil, and which (as in the instance of Ranikhet) may give rise to special affections in those using the water. These relatively impure waters are brought with cost and labour for distribution into the station. The proper course to adopt at hill stations, which all have a superabundant rainfall, is obvious, and the application of the remedy would not appear to present insuperable technical difficulties; the rain should be caught as it falls from the roofs of the various buildings, should be sorted in suitable tanks, and distributed from them. A supply of water obtained in this way might also be available at certain stations in the plains."

" *Amusements.*—The means for practising out-door games and athletic exercises are provided for the men in reasonable abundance, and their intellectual tastes are served by means of libraries and reading rooms, furnished appropriately and so liberally that amendment is not suggested. The reading rooms are comfortable and quiet, and orderly conduct on the part of those using them seems to be easily maintained. No doubt the reading rooms are powerful rivals to the canteens. As respects the majority, it would appear that the interest taken by the men in athletic games is languid and fitful, which, indeed, is what is to be expected. Games and exercises are the proper enjoyments of youth; they are salutary for them, and are the natural means of developing their physical powers, but, unless in exceptional cases, grown-up men of the class from which the majority of the soldiers are taken, look on games which make a call on their strength as labour, and when their wills are not coerced by the influence of others, they usually leave laborious amusements alone. It is at least disputable whether the encouragement of athletic exercises of the nature of games may not be also the encouragement of drinking; the effects of thirst and the assumed obligations of good fellowship may draw the participants to the canteen.

" *Intemperance.*—It is of interest to ascertain whether on the whole there is an increase of sobriety in the force of late years or not. Probably the only unequivocal, certainly at least the most reliable, evidence on the subject

" would be that obtained in a comparative examination of the record of crimes " in contrasted years, but this evidence is not within the scope of medical " inquiry, which in this connexion is properly occupied by evidence derived " from the comparative prevalence of sickness due to drink in different years. " In practice, the sickness taken for this purpose is that of the prevalence of one " kind of sickness only, viz., that of dyspepsia, the relative prevalence of which " is held to be a fair index of drinking habits amongst soldiers. In 1881 the " admission rate for dyspepsia in the men in this command is 38·0 per 1,000 " of the strength; in 1882 it is 42·1, showing an increase in the latter year " of 4·1. But whilst the prevalence of dyspepsia indicates more especially " the effect of the habits of tippling, the grossest effects of drinking are shown " in the prevalence of alcoholic poisoning and of delirium tremens; for the two " the rate of prevalence in 1881 is 3·5 per 1,000, whilst in 1882 it is 4·8, an " augmentation of 1·3; this increase confirms the propriety of taking the pre- " valence of dyspepsia as a measure of the influence of drinking habits among " soldiers. But year after year the extension of teetotalism in the army is a " fact, and it becomes a perplexing one when found in conjunction with a " greater number of the particular illnesses due to drink. On the 1st January " 1881 the number of total abstainers amongst the men in this command was " 3,621, being 94·8 per 1,000 of the strength, or one abstainer to (about) " every 10½ men. On the 1st January 1882 the number of abstainers was " 4,137, or one in 8¾ men (about), an increase of 19·1 per 1,000 on that of " the preceding year; thus, so far as medical statistical evidence is admis- " sible on the subject, it shows a fairly pari passu advance in the rate of " prevalence of drinking habits with that of advance in the rate of prevalence " of teetotalism. There is also other evidence, but of a secondary kind, of " perhaps slight or even doubtful value; but it may be stated that in 1881 the " admissions into hospital for accidents are in the rate of 99·1 per 1,000, in " the year 1882 (the year of increase of teetotalism) the rate is 107·6, an " increase of 8·7 per 1,000. This evidence may be impugned on the score of " its data embracing too short a period of time for observation, but even with " this limitation, as compared with vague opinion, it has the merit of relative " certainty, and it is submitted that it raises the question of the advantages " of the open canteen system lately brought into operation in the command. " The opinions of medical officers reporting are generally in favour of this " system, as against the former one of restricted purchase, and of more " restricted time for the purchase of drink, but these opinions are by no " means decisive, though they no doubt have the element of a certain weight " for the judging of the question. The open canteen system directly traverses " the opinion on the matter of drinking now nearly universally held by those " who have studied the subject in England, where legislative interference is " called for to shorten the time during which drink may lawfully be sold. " It might be right to endeavour to ascertain whether with an open canteen " there has not been a concomitant increase in the consumption of bazar " drink; if there has, the satisfaction permissibly entertained respecting the " smaller sale of canteen drinks which has (it is believed) taken place under " the open system will require to be qualified.

" PRESIDENCY DISTRICT.—*Fort William.*—The garrison consisted of a " battalion of infantry and a battery of artillery, giving together an average " annual strength of 964; the average daily sick was 63·5 per 1,000. Com- " pared with the previous year there was a marked decrease in the prevalence " of malarial fevers, due probably to the exhaustion of the epidemic influence " noted in last year's report. There was one case of cholera during the year " and enteric fever caused five admissions. The insanitary defects in con- " nexion with the station hospital mentioned in last year's report still exist, " and I would again urge the necessity of having water laid on to it in pipes " from the Calcutta waterworks, instead of being carried in carts as is the " present custom.

" *Dum-Dum.*—There was but one case of enteric fever in the year, two " cases of cholera occurred; the total amount of sickness was very much less " than in the preceding year, a decrease due to the exhaustion of the epidemic " influence general in the district which caused so much sickness in the year " 1881. The sanitary improvements recommended in my last report have not " been carried out, and I again solicit attention to them.

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" *Barrackpore.*—The health of the troops at this station has been excep-
" tionally good; paludal fever prevailed as usual in the third quarter of the
" year, and one case of cholera occurred in July. No insanitary conditions
" have been noted.

" *Darjeeling.*—No complaint has been made this year regarding insufficient
" hospital accommodation, but as the hospital at present in use only affords
" room for 29 patients, it will be necessary to augment the accommodation in
" the event of troops being located there.

" ALLAHABAD DIVISION.—*Allahabad.*—No sickness clearly consequent on
" a recognised and remediable insanitary condition has been reported. Malarial
" fevers were very prevalent during the autumn months, but the average daily
" sick of the year was almost identical with that of 1881. Eight cases of
" enteric fever occurred; there was a total absence of cholera among the
" European troops, though the disease prevailed slightly among the native
" population.

" *Cawnpore.*—Serious illnesses occurred at this station in No. 2 block,
" infantry barracks, occupied by the Scottish Rifles; very clearly demonstrating
" that there was a sickness especially affecting the men occupying the block,
" but the fact of the unwholesomeness of the block itself was not established
" by the available evidence. In connexion with the outbreak of enteric fever
" certain insanitary conditions in the environs of the barracks were abated.

" *Benares.*—Cholera occurred in July in the battery of artillery stationed
" here; the men were promptly encamped with satisfactory results. No
" sanitary defects are reported.

" OUDH DIVISION.—*Lucknow.*—The station hospital was found to be in-
" adequate for the requirements of the garrison, and competing plans for giving
" the necessary additional accommodation are now under consideration.
" Wards for lunatics, a special ward for prisoners, and a building for the recep-
" tion of cases of infectious illness, are much required, and day rooms and a
" library are desirable in replacement of the forced use of the hospital inner
" verandahs now made. A new military prison is under construction; an
" adaptation of the old cavalry hospital

" *Fyzabad.*—The health of the troops at this station was bad; they suffered
" greatly from malarious fevers, and in July cholera was epidemic in the bat-
" talion quartered here. After some temporising the barracks and hospital
" were vacated, and the outbreak ended, but whether naturally by exhaustion
" of the period of its lifetime or by the good effect of removal from infected
" buildings, is not apparent.

" *Sitapur.*—A very severe outbreak of enteric fever occurred in the wing of
" the regiment stationed here, but no evidence was found of its dependence on
" unwholesome condition in the buildings occupied.

" ROHILCUND DISTRICT.—*Moradabad.*—The deficiency of accommodation in
" the old barrack (stated to be badly ventilated and to be unsuitable for the
" occupation of European troops) was remedied by the conversion of the inner
" original verandah into rooms; the occupation of this barrack will, it is
" believed, be only temporary.

" SAUGOR DISTRICT.—*Saugor.*—The construction of new barracks and of a
" new hospital is on the point of being commenced.

" *Jubbulpore.*—Improvements have been made in the ventilation of the
" barrack latrines during the year.

" MEERUT DIVISION.—*Meerut.*—The surface drainage of part of the canton-
" ment, chiefly that of the parade ground of the Royal Horse Artillery, requires
" improvement.

" *Agra.*—The troops in the fort suffered in an exceptional degree from
" malarious fevers consequent on the irremediable defect of the position of the
" barracks.

" *Delhi.*—The troops here suffered excessively from malarious fevers; the
" portion of the barracks, near the banks of the Jumna, is the probable
" efficient cause of this. The main drain of the city of Delhi which, is carried
" into the Jumna to the west of the fort, is an objectionable feature.

" SIRHIND DIVISION.—From the report of the Administrative Medical Officer,
" it appears that the sanitary condition of the various stations in the division
" is, in every respect, satisfactory.

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"LAHORE DIVISION.—*Mian Mir.*—The Medical Officer adverts to the insufficient warming of the barrack rooms at certain seasons, and to the structural arrangements which cause them to be draughty and cold at the same time. The objection taken is a proper one, but the remedy in the case of dwellings which must be occupied in seasons of excessive heat, which concur with those of the stillest atmosphere, and in the season of a bitter dry cold, is not apparent.

"RAWAL PINDI DIVISION.—The Principal Medical Officer reports that the flooring of the station hospital at Rawal Pindi is broken and dangerous."

"PESHAWAR DISTRICT.—As respects the station of Peshawar it is reported that extensive repairs and improvements are needed for many of the barrack rooms, but the matter depends on the projected rearrangement of the station."

II.—MADRAS.

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The average annual strength of non-commissioned officers and men was 10,817, the number of admissions into hospital 11,564, and of deaths 119, inclusive of those of five invalids who died on passage home or after arrival in England; the number of men constantly sick was 642·45.

The annual admission rate, therefore, was 1069·0 per 1,000, the death rate 11·00, and that of constantly sick 59·39 per 1,000. Compared with the corresponding rates for the previous year a decrease of 85·0 per 1,000 has occurred in the admission rate, and in the death rate one of ·65 per 1,000, but an increase of 1·43 is observed in the rate of constantly sick; in comparison with the corresponding average rates for the preceding ten years, a decrease in the admission and death rates has occurred amounting to 156·6 and 5·83 per 1,000 respectively, and an increase in the rate of constantly sick of 1·34 per 1,000.

The average sick time to each soldier during the year was 21·68 days, and the average duration of each case of sickness 20·28 days, the former being an increase of about half a day, and the latter one of about two days on the corresponding periods for the previous year.

The total loss for the year by deaths and final discharge of men from the service was 215 men, or at the rate of 19·87 per 1,000, being a decrease on that for the previous year of 4·87 per 1,000.

For purposes of comparison the Principal Medical Officer, Surgeon General C. D. Madden, gives a few statistics of sickness in the Native Army, showing the rate of prevalence of sickness to be 711·2 per 1,000, less than that of the European Army by 337·8, but the rates of mortality, 13·5, and of invaliding, 43·4 per 1,000, are higher than those in the European Army by 2·5 and 13·7 per 1,000 respectively.

In Abstract No. XXIV. is a table taken from the report of the Principal Medical Officer showing the average strength, admissions, deaths, &c. in the different circles and stations in the command. Adverting to this table the Principal Medical Officer points out that it "shows that the improvement in the health of the troops has been general, with the exception of those quartered in the cantonments of Bangalore and Tonghoo, and of those on the line of march. In Bangalore, with an average strength of 1682 men, the ratio of admission per mille was 1214·03 compared with 1143·63, the average rate for the previous 10 years. The death ratio was 10·10 as compared with 10·66. At Tonghoo, with an average of 417 men, the ratio of admission per mille was 1244·60 compared with 930·59, the average of the previous 10 years. The death ratio was, however, much lower, viz., 9·59 as compared with 14·38 the decennial average."

The decrease in the rate of prevalence of sickness at some of the large stations as compared with that of the previous year is considerable, being 846·2 per 1,000 in the instance of Bellary, 347·6 in that of Rangoon, 191·07 in that of Secunderabad, and 160·6 in that of Kamptee.

The sick and death rates for Poonamallee are very high, owing to the small average strength, but they are a good deal less than the corresponding rates of 1881.

The admissions and deaths in the different classes and orders of diseases are shown in Abstract XXIII., and the relative prevalence of sickness and mortality

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from them in each of the administrative circles is shown in Abstract XXV., taken from the report of the Principal Medical Officer.

GENERAL DISEASES.—Including both groups of this class the admission rate 353·8 per 1,000 is less than that for the preceding year by 85·1 per 1,000, but the death rate 4·25 is higher by ·30 per 1,000.

Febrile group.—The total number of admissions was 1967, deaths 37, and constantly sick 61·78, being in the annual ratios of 181·8, 3·42, and 5·71 per 1,000 respectively. The admission rate shows a decrease on that of the former year, amounting to 103·6 per 1,000, and on that of the average of the three previous years; one of more than half of the latter, this reduction is due to the diminished prevalence of both the continued and paroxysmal types of fever.

The rate constantly sick shows also considerable decrease. In the death rate, however, as compared with that of the previous year, an increase of ·63 per 1,000 is noticed, and also a smaller fractional increase on the average rate for three years; this increment is due to the mortality from enteric fever, and would appear more marked but for a diminution in the mortality from cholera.

The Nagpore circle shows the highest admission rate, 505·4 per 1,000, which, however, is less than the rate for 1881 by 131·9; the Depôts come next with 331·9 per 1,000, followed by Burmah, both of which still show a decrease. The only districts in which there has been an increase are the Eastern and Western, and also among troops on the march.

The highest proportion of deaths was among troops on the march, and was 23·92 per 1,000, all due to cholera; the average strength, however, was small, being only 209. The next highest ratios were in the Bangalore and Eastern districts, 4·56 and 4·49 per 1,000 respectively, due principally to enteric fever; then the Hyderabad circle, 3·15, due to the same cause, and also cholera. All these rates are greater than in 1881. Nagpore gives a rate of mortality 2·39 per 1,000, a marked decrease on the former year when cholera was present in the circle.

Eruptive Fevers caused 12 admissions, the number and rate of prevalence being the same as in the previous year. There were no deaths. Six of the admissions were due to small-pox, four of the cases occurring at Bellary and two at Tonghoo; they were all mild. The disease was very prevalent in the native bazars in both places.

Continued Fevers.—558 admissions caused an annual rate of 51·5 per 1,000, less by 19·3 than in the preceding year, the deaths 23 or 2·13 per 1,000 were all due to enteric fever. The rate of prevalence for continued fevers generally was by far the highest in the Eastern and Burmah divisions, being 161·6 and 101·1 per 1,000 respectively, the former being an increase and the latter a decrease on the similar rates for the preceding year, which were also in that year the highest in all the circles. In the Western, Bangalore, and Hyderabad circles the average admission rate was 25·8 per 1,000, and in the Nagpore circle and the Depôts it was 17·0 per 1,000.

Enteric Fever.—The number of admissions for this form of fever was 47, and of deaths 23, being 4·3 and 2·13 per 1,000 respectively. The rate of mortality to attacks reaches 48·9 per cent. Abstract XXVI. gives a table showing the stations at which the admissions and deaths from enteric fever took place in each of the four quarters of the year 1882.

In the Bangalore Division there were 28 cases and 11 deaths, of these 19 cases 7 deaths occurred in the station of Bangalore. The Medical Officer in charge of sanitary duties points out in his report that enteric fever occurred mostly at two periods, corresponding to the second and fourth quarters of the year, and remarks, "The deduction is that some peculiarity of climate or some "insanitary condition existed at or previous to these periods which did not "exist at other times. The occurrence of the fever in the first period, five "days after the fall of rain, would point to a climatic condition rather than to "insanitary conditions, and the same may be said of the second period, com- "mencing about the end of the south-west monsoon, when the weather was "often oppressive." No insanitary condition in or about barracks likely to influence the causation of this disease could be discovered, but it is remarked that the impure nature of the drainage flowing into the Ulsoor tank, and other sources of pollution must always render the water supply open to suspicion.

In Bellary there were six cases and two deaths. These cases occurred in different barracks, and it is stated that the sanitary conditions surrounding

the men were, as a whole, very satisfactory, and there was nothing in the climate or season unusual. The cases were all in young soldiers from 21 to 24 years of age; three of them occurred in the first year of residence in India, one at two years, one in the third, and one in the fourth year. At Wellington three cases of enteric fever occurred, two of them fatal. These two were admitted from the same upper storey room on the same day; the third case from another block at a much later date. No cause could be ascertained for any of the cases, and the sanitation is said to be satisfactory. At Secunderabad cases occurred in every quarter of the year, the total number being eight, out of which six deaths took place. Six of the cases happened in young soldiers under 23 years of age, and five under two years' service in India. It is stated in the reports of medical officers that no insanitary condition existed within barracks, but the bazars are in an unsatisfactory state. Referring to the high mortality, it is remarked that the question arises as to whether there were not other cases of this fever which escaped diagnosis. In the Eastern District Madras shows two cases, both fatal, and St. Thomas's Mount three cases and two deaths; one case is stated to have been traced to pythogenic causes, viz., to inhalation of sewer gases in a room in which the man was working; the causation of the remaining cases is not defined. The remaining cases were, two at Rangoon and isolated ones at Cannanore, Calicut, Kamptee, and Thayetmyo. *Madras.*

Other continued fevers numbered 511 or 47·2 per 1,000, showing a decrease of 22·7 on the last year's rate. Simple continued fever caused a rate of 19·6 per 1,000, and febricula one of 27·5 per 1,000.

Paroxysmal Fevers.—A total of 1,370 admissions gives an annual rate of 126·6 per 1,000, less than that of the previous year by 82·2, and also considerably less than the average similar rate for three years. The death rate, ·37 per 1,000, is an increase on that of 1881, but about the average. Three deaths occurred from remittent fever, of which 69 attacks occurred. The remaining death was that of an invalid on board ship, and is returned as ague. The rate of prevalence of these fevers was highest, as in the previous year, in the Nagpore District, being 483·8 per 1,000, but this is a decrease of 79·8 on the rate of that year. In the Bangalore District the rate of prevalence was 139·1 as compared with 411·6 per 1,000 in 1881. A decrease in the rate of prevalence is noticed in all the other districts with the exception of the Western, in which there is an increase; the number of cases, however, were but few.

Cholera.—In the annual report on civil hospitals and dispensaries in this Presidency for the year under report it is stated that "the year 1882 opened "with a widely-diffused epidemic of cholera in most of the Southern Districts. "This was a continuation of the newly-invading epidemic, which first showed "itself at the Tirupati festival in October 1881. The months of January, "February, and March were distinctly unhealthy months as regards cholera, "and none of the Southern Districts escaped the epidemic. As the warm "weather came on cholera began to disappear, except in a few localities, but "the epidemic began to show signs of revival towards the end of the year in "many parts of the Southern Districts."

Although, as seen above, epidemic cholera was widely prevalent over Southern India, there were very few cases amongst the troops, the total being 15 admissions and 9 deaths. Compared with the rates of prevalence and mortality for the previous year, those of the present, 1·4 and ·83 per 1,000 respectively, show a reduction of 2·0 and ·80 per 1,000. Abstract No. XXVII. shows the stations at which the admissions and deaths from cholera took place in each of the four quarters of the year. Eleven of the cases and five deaths occurred in troops on the march. In S. Battery, 1st Brigade, Royal Artillery, en route from Kamptee to Bangalore, cholera broke out among the men; 7 cases occurred, 4 proving fatal; the outbreak was sudden and short. On the 28th October at night, the battery being at Camp Manghir, in the Berars, the disease made its appearance. The first case was reported at 10.30 p.m., and was followed by two more within three hours; three more cases occurred at 5 a.m., 29th October, just as the battery was starting for next camp, at which place the seventh and last case occurred at 12 p.m. the same day. The origin of this last case is traced to the former camp, for though the man did not report himself sick until after arrival at the new camp it was discovered that he had been suffering from diarrhœa and vomiting the previous night. Two cases

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also occurred amongst the native followers. Cholera is said to have been prevalent in the district, and as far as could be ascertained no fault existed in the sanitation or in the water supply of the camp, where the outbreak occurred.

The other outbreak on the march occurred in the left wing of the 1st Oxfordshire Light Infantry en route from Tonghoo to Bangalore. On the fourth day after leaving Tonghoo a man was attacked by cholera when in the boats and died the same evening, and three other cases ending in recovery occurred during the river passage. Cholera had been reported about Tonghoo before the wing left. Of the remaining cases, all fatal, one occurred at Bellary, one at Madras, and two at Secunderabad. In all cholera was prevalent at the same time in the bazars or surrounding districts.

Other diseases of the febrile group caused 12 admissions and one death, four of the cases were due to erysipelas, and one, the fatal case, to pyœmia, it occurred at Bangalore.

Diseases of the Constitutional Group.—Rheumatism.—The admission rate for these affections was 30·3 per 1,000, being very slightly less than the corresponding rate for the previous year. A considerable decrease in admission rate in the Eastern Nagpore and Hyderabad Districts is almost counterbalanced by an increase in the Western District, Burmah and the Depôts.

Syphilis.—The admission rate for primary disease was 109·7 per 1,000, being an increase of 21·1 on the corresponding rate for the previous year, and one of 6·5 on the average rate for three preceding years. The rate of prevalence of the secondary disease was 23·2 per 1,000, fractionally greater than the year 1881 but similarly less than the average rate for the previous three years.

Primary syphilis was most prevalent in the Bangalore District, being at the rate of 200·68 per 1,000, which is higher than in the former year by 39·83; next comes the Eastern District 148·11 per 1,000, a slight increase; followed by troops on the march 110·05, a considerable increase, equal to 85·81 per 1,000. A decrease of 24·45 per 1,000 occurred in the Hyderabad District and one of 15·20 in that of Nagpore. In the remainder of the circles a lesser increase is noticed.

The rate of prevalence of secondary syphilis did not vary greatly in any of the circles, except in the Eastern, where the rate, 7·18 per 1,000, shows a decrease of 33·80 on that for the preceding year.

Including gonorrhœa and its sequelæ the rate of prevalence for all forms of venereal disease reached 256·4 per 1,000, which is greater than the rate for the previous year by 38·8, and than the average rate for the preceding three years by 17·0 per 1,000. Speaking of the prevalence of venereal disease amongst the troops, the Principal Medical Officer remarks "that though lock hospitals "have been for years established in all the towns occupied by European troops, "yet the Contagious Diseases Act has never been thoroughly carried out, indeed "it would be impossible to do so in such towns as Madras, Bangalore, or "Secunderabad, where there is a large number of cooly women, in addition to "those periodically examined under the Act, with whom the soldiers consort."

Venereal diseases are extremely prevalent amongst the populations of the towns of Southern India, and not only in the large ones but also in the smaller, and in the rural districts.

In the annual report on the civil hospitals and dispensaries above quoted it is thus stated: "The admissions from syphilitic diseases are more numerous than ever, due, of course, in a measure to the opening out of new "centres of relief. The extent to which the syphilitic virus has affected "the rural populations who live far from town or cantonment is very "lamentable. Some of the worst and most intractable cases of syphilis in "females I have ever seen came under my notice during inspection tours in "1882, and it was noticeable that these cases came from rural villages and "not from great centres of population. Whatever may be said against the "legal control of prostitution, there is no doubt that the measures adopted in "this country have favourably modified the type of disease as it presents "itself amongst the females subject to cantonment rules. The medical "practice of all our large civil hospitals shows but too clearly the extent to "which this special class of maladies affects the health and undermines the "physique of the native population."

Tubercular Diseases.—The admissions for these diseases were 67 in number, and there were 7 deaths, inclusive of 1 of an invalid. The admission rate, 6·2 per 1,000, and the death rate, ·65 per 1,000, show a decrease of 1·1 and ·51 respectively; 62 of the admissions and 6 of the deaths were due to phthisis pulmonalis. In the depôts, Burmah, and Eastern Divisions there was some increase in the rate of prevalence of these diseases, and a decrease in the remainder. Exclusive of the Depôts the highest admission rate was in the Burmah Division. *Madras.*

Other *constitutional diseases* caused 28 admissions, principally from anæmia; two fatal cases are recorded, one of medullary cancer and one of anæmia.

LOCAL DISEASES—*Diseases of the Nervous System.*—The admissions numbered 149, the deaths 15, and the respective annual ratios were 13·8 and 1·39 per 1,000. The former rate shows a decrease of 2·4 and the latter an increase of ·33 per 1,000 on those for the previous year, while in both cases a decrease is noticed as compared with the average of three years. In the different divisions an increase of prevalence of these diseases is noticed in the Western and Nagpore Districts and in troops on the march, but a decrease has occurred in the remaining districts. Among the principal causes of admission were sunstroke 12 cases, epilepsy 21, neuralgia 65, and mental disease 30 cases; 6 deaths are returned from sunstroke, 7 from other forms of cerebral disease, 1 from melancholia, and 1 from hydrophobia; the latter case occurred at Kamptee. The man was admitted on the 16th April, having been bitten by a dog in the previous February; the case proved fatal in 48 hours after admission.

Diseases of the Eye, Ear, and Nose caused rates of admission of 14·0, 11·0, and ·7 per 1,000 respectively, very nearly similar to those of the corresponding rates for the previous year, and also to those of the triennial average.

Diseases of the Circulatory System caused 231 admissions and 10 deaths, including that of an invalid after arrival at home. The resulting annual ratios are 21·4 and ·92 per 1,000, which are greater than the corresponding rates for 1881 by 6·5 and ·25 per 1,000; the rate of prevalence is also above the average of three years, but the death rate almost corresponds with the average.

In the Western District there was an increase in the rate of prevalence of these affections of 34·37 per 1,000, and to a lesser extent in the Depôts, and in the Nagpore, Hyderabad, and Eastern Districts.

Among the admissions were 181 cases of palpitation, 26 of valvular disease of heart with 4 deaths, 8 of aneurism with 5 deaths, and 1 fatal case of angina pectoris.

Diseases of the Absorbent System caused an admission rate of 28·2 per 1,000, differing only fractionally from the rate for the preceding year, and being slightly below the triennial average. In 299 cases out of 305 the inguinal were the glands affected. The highest rate of prevalence, 47·58 per 1,000, was in the Eastern District, and the lowest, 9·58, in Nagpore. The variations in the rate of prevalence in the different circles are unimportant.

Diseases of the Respiratory System.—333 admissions and 3 deaths give annual rates of 30·8 and ·28 per 1,000, both being slightly less than in 1881, as well as being below the average. The greatest prevalence of these affections occurred in the Bangalore and Nagpore Districts, the admission rates being 49·41 and 41·92 per 1,000, and an increase on those of the preceding year of 19·97 and 21·83 per 1,000 respectively. The most marked decrease occurred in the rates for the Hyderabad and Burmah Divisions, equal to 15·17 and 13·14 per 1,000. Bronchial affections caused 285 admissions, pneumonia 15, with 2 deaths, and pleurisy 12, with 1 death.

Diseases of the Digestive System.—The admission rate, 224·6 per 1,000, differs only from that in 1881 by the small increase of 2·4, and is lower than the average by 27·0 per 1,000. The death rate, 2·59 per 1,000, compares favourably with that of the preceding year, showing a decrease of ·87, and also with the average, the reduction being 1·36 per 1,000. The deaths numbered 28, two of them occurring in invalids.

The rate of prevalence of these affections is highest in the Burmah Division, reaching the rate of 304·39 per 1,000, followed by the depôts 268·39, current with these are the highest death rates, 5·82 and 5·77 per 1,000. In both these districts there is a considerable increase over the rates for 1881. The

Madras. high rates in the depôts are due to the number of invalids sent to Poonamallee. The lowest rates of prevalence and mortality were in the Nagpore Circle, 161·68 and nil per 1,000 respectively. The majority of the admissions were due to hepatic affections, dysentery, dyspepsia, and diarrhœa. Thirteen of the deaths were due to hepatitis, 6 to abscess of the liver, 6 to dysentery, 2 to diarrhœa, and 1 to gastric ulcer.

Abstract XXVIII. shows the prevalence of dysentery, diarrhœa, and hepatitis in each of the divisions of the Command during the year, and Abstract XXIX. the prevalence and mortality from these diseases in each quarter of the year.

Diseases of the Urinary System.—The admission rate, 131·4 per 1,000, is higher than in 1881 by 15·8, due entirely to the increased prevalence of gonorrhœa and its sequelæ, the rate of which, 123·5 per 1,000 is greater by 17·5. The greatest prevalence of gonorrhœa occurred in the Hyderabad Circle, followed by the Eastern, Bangalore, and Nagpore Circles in decreasing admission rates. Other diseases caused few admissions. No death took place in this order of diseases.

Diseases of the Generative System, of the Organs of Locomotion, and of the Cellular Tissue, with admission rates of 17·3, 6·3, and 16·4 per 1,000, differing very slightly from the corresponding rates in the previous year, call for no special notice.

Diseases of the Cutaneous System gave an admission rate of 71·7 per 1,000, being a diminution of 12·6 on the past year, and also below the average. The cases were of a varied character, and do not need attention.

CONDITIONS.—*Debility.*—Under this head are returned 206 admissions, giving the annual ratio of 19·0 per 1,000, which is less than in 1881 by 7·8, and is considerably less than the triennial average. The decrease has occurred in all the circles except in that of Bangalore, where there is a slight increase. In the depôts there is a considerable increase owing to the number of invalids.

POISONS.—The admissions for poisoning numbered 29, and there was one death. The annual ratios, 2·7 and ·09 per 1,000, are less than in the previous year by 2·4 and ·10 respectively; 21 of the admissions were due to delirium tremens and 7 alcoholic poisoning. The remaining admission was caused by snake bite. This case occurred at Secunderabad. A man was playing with a krait, when it turned and bit him in the right hand. This happened in the early morning, but no urgent symptoms showed themselves for some eight hours afterwards, when spasm of the glottis and swelling of the throat commenced, which gradually grew worse; he was somewhat relieved by treatment for a time, and went on fairly through the night, becoming worse again next morning. He died in the course of the day, about 32 hours after receipt of the injury.

INJURIES.—One admission is returned for *general injury*; the case occurred at Madras and was one of multiple injury with supposed fracture of the pelvis, the result of a fall from a height of 30 feet. He was still under treatment at the close of the year under report. Four accidental deaths by drowning took place, two at Secunderabad, one at Wellington, and the other at Cannanore.

Local injuries caused an admission rate of 103·6 per 1,000, and a death rate of 1·11; both these are slightly greater than in the former year. These injuries are said to have been most common in those circles where cavalry and artillery are quartered. The highest admission rate was in the Bangalore Circle, 133·79 per 1,000, and the lowest, 85·23, in the Burmah. The principal causes of admission were fractures, concussion of the brain, wounds, &c.; there were 12 deaths, eight of which were *suicidal* and due to gunshot wound, and four accidental, two being due to fracture of skull, and two to contusions.

One self-inflicted wound, cut throat, and one accidental gunshot wound occurred, both of them recovered. Of the suicides four occurred at Secunderabad, two at Kamptee, one at Bellary, and one at Wellington. In three of the cases no motive or reason could be ascribed for the act, in three the men are said to have been drinking heavily, in one the man was in a greatly depressed state due to family troubles, and the other case occurred in an invalid in very bad health.

Surgical Operations.—None are recorded.

Invaliding.—The number of men invalided home during the year was 321 and of men finally discharged the service 96, being in the respective annual ratios of 29·67 and 8·87 per 1,000 respectively; the former being an increase of 2·14 and the latter a decrease of 4·22 per 1,000 on the corresponding rates for the previous year. In comparison, however, with the average similar rates for the preceding 10 years, the rate of invaliding shows a reduction of 11·39 and of final discharge one of 7·49 per 1,000. As compared with the previous year an increase of invaliding is noticed chiefly in the circulatory, nervous, and digestive systems, the first being most marked with an increase of 2·74 on the former rate of 3·08 per 1,000. The principal diseases necessitating invaliding were cardiac affections 62 cases, hepatic diseases 36, debility 47, mental affections 21, phthisis pulmonalis 18, secondary syphilis 12, &c., &c. Of men finally discharged the chief causes were tubercular diseases, and diseases of the circulatory and digestive systems, the two former in lesser proportions than in the previous year.

Officers.—The average annual strength was 314, there were 249 attacks of illness and 3 deaths, and 27 were invalided home. The annual ratios per 1,000 are therefore 792·9, 9·5, and 85·9 respectively. As compared with the foregoing year there is an increase in the rate of prevalence of disease of 16·1 per 1,000 and in the rate of invaliding one of 9·2 per 1,000; there is, however, a decrease in the rate of mortality of 3·02 per 1,000.

Most of the illnesses were caused by the following diseases, continued fevers (including four enteric) 35, ague 20, constitutional diseases 14, diseases of the digestive system 40, respiratory system 15, and injuries 44. The three deaths were due to enteric fever, phthisis pulmonalis, and spinal meningitis. The invaliding was caused principally by fevers, diseases of the digestive and urinary systems, and debility.

Women.—In an average annual strength of 851 women, the admissions, exclusive of 246 for childbirth, numbered 888, being in the annual ratio of 1043·4 per 1,000, which is an increase of 301·7 per 1,000 as compared with the similar rate for the previous year. The deaths, 11, however cause a rate of mortality of 12·92 which compares very favourably with that of 1881, showing a decrease of 6·42 per 1,000. Under the head of general debility there were 246 admissions into hospital, of diseases of the digestive system 187, and 2 deaths; of the generative system, 139, and 1 death; fevers 121 admissions, and 1 death; diseases of the respiratory system 35 admissions and 1 death; of the nervous system 16 admissions and 3 deaths; and all other diseases, excluding childbirth, 105 admissions.

Children.—In an average annual strength of 1,466 children there were 1,514 admissions to hospital and 59 deaths, being in the annual ratios of 1032·7 and 40·24 respectively; compared with the foregoing year there is an increase of admission rate of 447·6 per 1,000, and of the rate of mortality of ·29 per 1,000. Of the deaths no less than 23 were due to diseases of the digestive system, for which affections there were 410 admissions, 305 admissions occurred from fevers, 199 from debility, 188 from respiratory diseases, 29 from nervous affections, 26 constitutional diseases, and 357 from other causes.

Sanitary Conditions.— Surgeon General C. D. Madden, Principal Medical Officer, reports that "the sanitary state of the barracks and their surroundings have been carefully looked after during the year.

"Deputy Surgeon General Chapple points out the unsatisfactory sanitary condition of Fort St. George owing to the crowding of the numerous buildings required for the garrison, arsenal, and a number of Government offices into so small a space, that the moving population belonging to these offices represents about 2,000 employés, and that in his opinion it is only the sea breeze which saves it from becoming a hotbed of disease. He considers the barracks at Fort St. George most unsuitable for the requirements of the climate of Madras, and points out that they were built in blocks many years before the present rules of construction were understood.

"The artillery guard room at Secunderabad was overcrowded, this was brought to the notice of the Officer Commanding, who promised to provide more ample accommodation. The infantry barracks at Kamptee which have been undergoing re-modelling for years are now approaching completion, and are much better lighted, ventilated, and roofed; the old flooring has all

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" been removed and replaced with a solid and fresh foundation of cement and " gravel.

" The 8th block of the European infantry barracks in Rangoon is in pro- " gress of erection, and is nearly fit for occupation; the guard room in these " barracks is reported damp and unhealthy. The cells of the infantry barracks " at Bangalore have been improved.

" *Lighting.*—The use of kerosine oil is pretty general throughout all the " barracks with the exception of those in Burmah, and is a vast improvement " on the old system.

" *Latrines, &c.*—The dry earth system of conservancy is carried out in all " latrines, and the poudrette removed to some distance from the barracks. " The ventilation of the latrine in Fort St. George is considered defective, " though some attempts have been made to improve it. The automatic seats " in St. Thomas' Mount are reported to work well, supplying each time they " are used an abundance of dry earth.

" There are ample means of ablution in all the barracks, and in many " stations there are plunge baths both for men and women, the former resort " to them freely in the hot weather under certain restrictions.

" *General sanitary condition of barracks.*—Though much care, labour, and " money have been expended on improving the surroundings of the barracks " throughout the Presidency still there remains much to be done in this " respect. The barracks themselves, and the several buildings that are con- " nected with them, are kept in as good order as possible. The main faults are " due to their situation.

" At Bellary the drainage around the barracks is reported to be defective, " and the Ulsoor barracks occupied by the Horse Artillery are in close prox- " imity to the thickly populated district of Ulsoor, the sanitary arrangements " of which are by no means perfect.

" At Bangalore and Wellington stone drains have been laid down round the " barracks which are easily kept clean. More drains are required to carry off " the storm water from the roof of the blocks occupied by the men. With re- " ference to the surroundings of the barracks in Bangalore, Deputy Surgeon " General Murray reports that in the immediate neighbourhood of the cavalry " and artillery barracks, where the ground is much cut up by nullahs and " small water courses, which are habitually resorted to by the natives for the " purposes of nature, the filthy accumulation formed during the dry weather " is washed by the first heavy rain into the different tanks into which they re- " spectively lead. As the Ulsoor tank, from which the greater part of the " water for drinking is derived, is subject to the like contamination, as well as " to that arising from the surface drainage from a thickly inhabited part of the " cantonment, it must have the effect of polluting the water and rendering it " objectionable if not unwholesome.

" At Secunderabad the state of the ground in the vicinity of the 2nd " British infantry barracks is said to be unsatisfactory, and the palatial " barracks occupied by the artillery and cavalry to be too much exposed; " also that both need surface drains to carry off the storm water.

" Considerable sanitary improvements have been made in the native bazar " which is close to the infantry barracks at Kamptee. The drainage on the " eastern side of the European infantry barracks in Rangoon, which was very " unsatisfactory, has been improved.

" *Cooking.*—The general complaint against the kitchens, which are, as a rule, " constructed on the Indian system, is that they are badly ventilated, wanting " chimneys to carry off the smoke. In Wellington stoves on the American " principle are in use, and answer admirably. New cookhouses have been " built for the infantry barracks at Kamptee, but the site appears to be objec- " tionable, as it interferes with the free perflation of air from the north-east " through the barracks.

" *Rations* are reported to have been, as a rule, good and sufficient. In " Burmah, however, some complaints are made about the sameness of the " rations, which consist nearly always of beef, mutton being allowed only four " times a month. There is also great difficulty in procuring good vegetables; " onions and pumpkins being, as a rule, the only ones attainable; the institu- " tion of soldiers' gardens in these stations is very desirable.

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"*Water Supply.*—Great attention has been paid to this important subject throughout all the stations, a careful chemical analysis is periodically made of the waters in use for drinking purposes. As a rule, the sources of the water supply are well conserved, but in some stations where there are two sources, one used for drinking and the other for cooking purposes, it is difficult, if not altogether impossible, to prevent both being used indiscriminately."

"The water supply of Fort St. George is good, it is obtained from the 'seven wells,' and is distributed by pipes.

"The water supply of Bangalore is very unsatisfactory, the subject has been again brought to the notice of Government. How far the contamination of the water affects the question of the prevalence of enteric fever it is impossible with our present knowledge to say. In Bellary and Wellington the difficulty of checking the bheesties from using their *puckals* (water skins) for carrying other water than that sanctioned for drinking purposes is pointed out. It would no doubt be well if water could be distributed to all barracks and hospitals by pipes. In Kamptee there are two sets of wells, one for drinking water, which is carefully conserved, the other is supposed to be only used for cooking purposes.

"*Canteen Supplies, &c.*—The quality of the canteen supplies, such as beer, rum, and arrack, has been generally good. The hill beer supplied by the canteen at Wellington was considered to be deficient in hops and often sour, therefore English beer has been substituted.

"The system of permitting men to have as much beer as they like in canteens, while it has the advantages of keeping men away from the far worse bazar liquor, still tends to lead them to the belief that they can drink beer with impunity. Coffee shops are established in most stations and are either managed regimentally or leased out to a native contractor, the former appears to be the better plan, as the articles supplied are said to be cheaper and better.

"*Clothing.*—No change has been made in the clothing of the men except the substitution of khaki drill for the white formerly in use. The arrangements for wearing the lighter or the warmer clothing are made locally.

"*Hospital Accommodation, &c.*—The system of station hospitals was introduced throughout this Presidency from the 1st April 1882, and has worked well considering the way the troops are detached, and that even where they are in one cantonment, like Bangalore or Secunderabad, they are much scattered. In their sanitary aspect the hospitals are well looked after, and leave little to be desired. The room provided has been ample and there has been no overcrowding or sign of any disease due to mal-administration.

"It is reported that the situation of the station hospital in Madras is bad, being close to Black Town on the public road (the great thoroughfare to the railway station close by) on one side, and the filthy Cooum river on the other. Neither very pure air, nor that quietness necessary to the sick, are obtainable by the patients; there are no small isolation wards, a serious defect in any hospital. The construction of a new hospital for women and children at Wellington has been sanctioned and will probably be commenced this year. A new station hospital has been sanctioned for Kamptee, as the present north station hospital is unsatisfactory. When this building is finished the two hospitals at present in that station will be amalgamated. The hospitals at Tonghoo and Rangoon are not good. New buildings have been sanctioned for both stations, but the question of a site for that at Rangoon is still under consideration."

III.—Bombay.

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In an average annual strength of 10,197 non-commissioned officers and men there were 14,338 admissions into hospital and 110 deaths (including those of four invalids who died, either during the homeward voyage or after arrival in England), and the average number constantly sick was 626·86. The admission rate per 1,000 of strength was therefore 1406·1, the death rate 10·79, and the rate constantly sick 61·47 per 1,000. Compared with the corresponding rates for the previous year we find a decrease of admission rate of 311 9 per

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1,000, of death rate 4·43, and of the rate constantly sick 5·91 per 1,000; and compared with the similar average rates for the preceding 10 years we find a decrease of 174·6 per 1,000 in admission rate, of 6·21 in death rate, but an increase of 3·74 per 1,000 in the rate constantly sick.

The average sick time to each soldier in the year was 22·44 days, and the average duration of each case of sickness 15·96 days, the former being shorter by 2·15 days and the latter longer by 1·65 days than the corresponding periods in the previous year.

The relation of sickness and its results to the various circles and stations in the Command is shown in Abstract XXXIII., which gives a table, taken from the report of the Principal Medical Officer, Surgeon General G. Auchinleck, showing the admissions and deaths in each.

On comparing the figures in the above table with those of the previous year it will be observed that the admission rates for the year under report at almost all the stations, excluding Sanitaria and the troops on the march, have been considerably reduced. There has been an increase at only three stations, Aden, Indore, and Neemuch, where the ratios have risen from 802·6, 1858·7, and 2265·7 to 967·9, 2485·1, and 2912·4 respectively. The most remarkable decrease has taken place at Baroda and at the under-mentioned stations, where the ratios are respectively less than in 1881, according to the following figures:—Baroda, 1,639·6; Khandalla, 843·5; Nasirabad, 824·6; Ahmedabad, 794·9; Ahmednagar, 726·3; and Poona, 640·7 per 1,000.

The highest ratios were furnished by Neemuch with 2912·4 per 1,000; Karachi, 2492·5; Indore, 2485·1; and Baroda, 2395·2 per 1,000, and the lowest ratios occurred in Deolalee, with 848·7; Poona, 867·1; Asirgarh, 959·3; and Aden, 967·9 per 1,000. The highest death rate, 29·70 per 1,000, is shown by Indore, whilst Ahmednagar, which furnished the highest ratio of mortality, 27·09 per 1,000 in the preceding year, excluding Sanitaria and depôts, gives the lowest in the year under report, it being only 2·12 per 1,000.

In comparison, also, with the average of the preceding 10 years, a decrease of admission rate has occurred at all stations (excluding Sanitaria, &c.), except at Neemuch, Karachi, Indore, and Satara, at which places the increment reaches 781·7, 699·3, 610·6, and 70·7 per 1,000 respectively. The highest admission rate in the decennial period is returned as 2390·4 for Baroda, at which place the rate for the year under report was almost identical; and the highest average death rate in the former period is found to be for Neemuch, 26·96 per 1,000, where in 1882 the rate of mortality only reached 16·13 per 1,000.

The admissions and deaths in the different classes and orders of diseases are shown in Abstract XXXII., and the relative prevalence of sickness and mortality from them in each of the administrative circles is shown in Abstract XXXIV.

General Diseases.—*Febrile Group.*—The number of admissions under this head was 5,958 and of deaths 38. The annual admission rate, 584·3 per 1,000, and the death rate, 3·73 per 1,000, compare very favourably with the corresponding rates for the preceding year, the former showing a decrease of 245·0 and the latter one of 1·07 per 1,000. The rate of men constantly sick from these diseases, 15·69 per 1,000, is also less than in the foregoing year, the diminution being 6·80 per 1,000. In comparison with the average similar rates for the previous three years, the decrease in those for the year under report is still more marked, being 476·8, 1·63, and 8·54 per 1,000 respectively. *Eruptive fevers* caused 19 admissions, 17 being for measles and 2 for varicella, nearly all occurred in the Poona Circle.

Continued Fevers.—The admission rate, 79·6 per 1,000, is greatly less than that for 1881, and also than that for the average of the three previous years, the decrease being 127·3 and 76·7 per 1,000 respectively. The death rate, 1·87 per 1,000, shows a decrease of ·23 on the previous year and one of ·74 on the triennial average. The highest rate of admission for this class of fevers occurred in the Sind Circle, but the highest death rate in the Mhow Circle, the former being 125·3 and the latter 3·03 per 1,000. In the Presidency Circle the admission rate, 67·2, and the death rate, 2·89 per 1,000, are higher than the corresponding rates for the previous year by 13·9 and 2·05 per 1,000 respectively; of eight deaths in this circle seven were caused by enteric fever.

In the Sind Circle the admission rate, 125·3 per 1,000, is lower than that for 1881 by 790·3 per 1,000, but the death rate ·85 compares with *nil* in that year; one death happened from enteric fever. In the Poona Circle the admission rate 63·8, and death rate *nil*, are less by 96·4 and 3·82 per 1,000. In the Mhow Circle the admission rate, 94·6 per 1,000, shows a decrease of 77·7, but the death rate, 3·03, is higher by ·27. Ten deaths from enteric fever occurred in this circle. There was a slight decrease in the prevalence of these fevers at the Sanitaria, and a considerable one in the case of troops on the march. *Bombay.*

Enteric Fever caused 43 admissions and 18 deaths as compared with 34 admissions and 19 deaths in the previous year, In Abstract No. XXXV. will be found a table, taken from the report of the Principal Medical Officer, showing the stations at which the admissions and deaths took place from enteric fever in each of the four quarters of the year.

Of the total number of admissions and deaths the fourth quarter furnished the largest number, viz., 18 and 9 respectively, followed by the first quarter, with 11 admissions and 5 deaths; the third quarter with 11 and 2, and, lastly, by the second quarter with 3 cases and 2 deaths. At Nasirabad 13 cases and 8 deaths occurred, chiefly in the latter months of the year; at Bombay (Colaba) 9 cases and 4 deaths are returned; of these 8 were received from the 2nd Battalion Derbyshire Regiment and the 2nd Battalion Manchester Regiment on board H.M.S. "Euphrates" from Alexandria in October; the other case was that of a man recently arrived from up country; at Karachi 7 cases and 1 death occurred; six of these occurred in the first quarter of the year, and all in young soldiers; five in a recently arrived draft; no local insanitary cause could be ascertained. At Neemuch 6 cases and 1 death occurred; of these some of the cases are said to have been contracted probably in the Sudder Bazar or native villages.

Paroxysmal Fevers.—5,083 admissions and 10 deaths gave an admission rate 498·5 per 1,000, and a death rate ·98 per 1,000, and a rate constantly sick 12·63 per 1,000. Compared with the corresponding rates for the previous year a decrease is noticed of 215·8, ·92, and 3·75 per 1,000, and in comparison with the previous triennial average the decrease is still greater, being 399·6 per 1,000 in the case of admission rate, 1·32 in that of mortality, and 7·22 per 1,000 in that of constantly sick. Of the total number of cases 95 were due to remittent fever, and of the deaths 7 were caused by remittent fever, the remaining 3 being returned as resulting from ague.

The rates of prevalence of malarious fevers and of mortality therefrom in the different circles were as follows. In the Presidency Circle the admission and death rates were 236·2 and 1·08 per 1,000, being a decrease on the corresponding rates for the previous year of 179·8 and ·18 per 1,000 respectively. In the Poona Circle the admission rate 218·5 is less by 275·0 per 1,000 than that for 1881, while in the death rate, ·79 per 1,000, there is a very slight increase; in the Sind Circle the admission rate, 1256·6 per 1,000, is the highest in the Command, and is an increase on the previous year of 516·7 per 1,000; the death rate, however, is *nil*; in the Mhow Circle the admission and death rates were 680·6 and 1·21 per 1,000, showing reductions of 184·5 and ·94 per 1,000 respectively; in troops on the march the admission rate was 120 per 1,000, a decrease of 670·1; and in Sanitaria the admission and death rates, 656·9 and 4·90 per 1,000, are less by 288·4 and 2·91 respectively.

Cholera.—10 cases and 7 deaths occurred in the whole Command as compared with 6 cases and 3 deaths in the previous year. Abstract XXXVI. gives a table showing the stations at which the admissions and deaths took place in each of the four quarters of the year. During the first and second quarters no case occurred in any of the circles, but in the third the disease manifested itself in the Mhow and Presidency Circles by the occurrence of 9 admissions and 6 deaths. Of these, Nasirabad furnished 6 cases and 5 deaths, Deolalee 2 cases, which recovered, and Indore 1 fatal case. During the fourth quarter there was a fatal case at Neemuch.

Diseases of the Constitutional Group.—Rheumatism. 358 admissions are returned from the various forms of this disease, and there were two deaths from rheumatic fever. The rates of prevalence and mortality, 35·1 and ·19 per 1,000, are higher than those in 1881 by 4·8 and ·09, but almost identical with those of the triennial average. A decrease in rate of prevalence is found in the Poona Circle and among troops on the march, but an increase in that of all other divisions.

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Syphilis.—For the primary form of the disease the admission rate was 69·2 per 1,000, showing a reduction of 17·0 on the rate for 1881 and one of 26·8 on the average rate for three years; for the secondary form the rate of admission, 24·9 per 1,000, shows an increase of 3·5 on the previous year and one of 2·4 on the average rate.

The Poona Circle presents the highest admission rate for primary syphilis, 78·1 per 1,000, and the Sanitaria that for secondary syphilis 58·8 per 1,000, the former showing a decrease and the latter an increase on the rates in the previous year. In the Presidency Circle the admission rates for primary and secondary syphilis were 59·0 and 23·5 as compared with 87·3 and 21·8 in 1881. In the Sind Circle the rates 61·4 and 22·2 are higher by 18·2 and 17·3 respectively; and in the Mhow Circle the admission rate, 76·1 per 1,000 has fallen by 31·5 in the primary diseases, but there is only a fractional difference in secondary affections.

Including gonorrhœa and its sequelæ, the rate of prevalence for all forms of venereal disease was 200·1 per 1,000, being a decrease of 11·4 per 1,000 on the corresponding rate for the previous year.

Speaking of the prevalence of venereal disease and of the benefit derived from the establishment of lock hospitals, the Principal Medical Officer remarks "that venereal disease has continued to decrease at nearly all stations "where lock hospitals are maintained. At two only is there any increase, "Aden and Karachi. At the former of these places the increase is due to "imported cases, for the medical officer states that only 37 cases were con- "tracted in Aden in 1882, whereas 58 occurred in the previous year. At "Karachi the numbers are small, and though higher than those of 1881 are "much less than in 1880. All reports agree on one point, that the character "of syphilitic disease is much milder than formerly. It will be observed that "at non-protected stations the disease steadily increases; much of this is "due to the fact that women who do not wish to be placed on the registers "fly to stations where the Act is not in force. From Poona they take refuge "at Satara, which is only 68 miles distant. From Ahmedabad and Karachi "they go to Hyderabad and Baroda. This would be a serious evil if there "were many troops in these unprotected stations, as we should be merely "driving the disease from one station to another; but fortunately at these "stations there are only small bodies of men, and although the ratios are "high the actual numbers diseased are not great."

Tubercular Diseases.—62 admissions are returned for these affections and 8 deaths (including 3 of invalids after leaving the Command), being in the annual ratios of 6·1 and ·79 per 1,000, both showing a fractional decrease on the corresponding rates for the previous year. 58 of the cases and all the deaths were due to phthisis pulmonalis. In the Presidency, Poona, and Mhow Circles there is but little difference in the rate of prevalence of these diseases as compared with the preceding year; but in the Sind Circle and among troops on the march it is reduced to *nil*, and at the Sanataria from 54·7 per 1,000 to 24·5 per 1,000. The death rate at the Sanataria, 4·90 per 1,000, exceeds that for the previous year by ·99, and is considerably higher than those of the Presidency and Poona Circles. No deaths took place in the remaining divisions.

Scurvy and Purpura.—Four admissions are shown as against 13 in the preceding year.

Other diseases of the constitutional group caused 25 admissions in all and 1 death, or 2·5 and ·10 per 1,000, the former being a fractional increase on, and the latter identical with, the similar rates for 1881. The cases were cancer 1, diabetes 3, and anæmia 21, of which one case is returned as fatal.

LOCAL DISEASES.—*Diseases of the Nervous System.*—The admission rate, 16·7 per 1,000, shows an increase of 2·8, but the death rate, ·79 per 1,000, a decrease of ·61 on the corresponding rate in 1881. The chief causes of admission were insanity 21 cases, sunstroke 16 cases, 5 being fatal, epilepsy 21, encephalitis 2, and apoplexy 1. From each of the three last-named diseases there was one death. The sickness from this class of diseases has diminished in the Sind and Mhow Circles, but increased in the remainder, in none, however, to any great extent.

Diseases of the Eye, Ear, and Nose.—The respective annual admission rates under each of these headings was 14·9, 13·1, and ·1 per 1,000, the correspond-

ing figures for the previousy ear having been 15.3, 9·6, and ·1. In ophthalmic affections an increase of prevalence of 30·4 per 1,000 occurred at the Sanataria, and slightly in the Sind andPresidency Circles.

Diseases of the Circulatory System.—An increase of 5·0 per 1,000 has taken place on the admission rate for the preceding year 14·1, the death rate ·59 is almost identical with the corresponding rate. In the Poona and Mhow Circles there has been an increase of prevalence of these affections, in the Sind Circle a decrease of about half the previous rate, while that for the Presidency remaining almost identical with that of the former year. 40 cases of valvular disease of the heart and 7 of aneurism occurred, the former caused 4 and the latter 2 deaths.

Diseases of the Respiratory System caused 462 admissions and 8 deaths, of these 41 admissions with 6 deaths were due to pneumonia, and 22 with 2 deaths to pleurisy. The admission and death rates, 45·2 and ·79 per 1,000, being respectively less than in the previous year by 7·6 and ·41 per 1,000, and 11·9 and 1·20 per 1,000 less than the triennial average. In the different circles as compared with 1881 an increase of admission rate, amounting to 52·4 per 1,000, is observed for the Sanitaria, but a decrease in all the others.

Diseases of the Digestive System.—The admissions, 1,863, and deaths, 13, for the year under report give rates of prevalence and mortality of 182·7 and 1·27 per 1,000 respectively, which compare very favourably not only with the corresponding rates for the previous year, 216·4 and 4·71 per 1,000, being a decrease of 33·7 and 3·44 per 1,000 respectively, but also with the average similar ratesfor the preceding three years, the decrease being in this case 48·8 per 1,000 in admission rate and 3·41 in the death rate.

There has been a decrease of admission and death rate throughout all the divisions except the Sanitaria, where the rate of admission has risen from 277·3 per 1,000 in 1881 to 406·9 in 1882, while the death rate, 4·90 per 1,000, is lower than that for the former year by 14·63. The decrease in admission and death rates in the Presidency Circle was 34·7 and 2·93 per 1,000, in the Sind Circle 39·0 and 3·08, in Poona 50·0 and 6·12, in Mhow 49·5 and 1·23, and on the march 96·3 and 3·82 per 1,000. Abstract XXXVII. gives a table taken from the report of the Principal Medical Officer showing the prevalence of dysentery, diarrhœa, and hepatitis in each of the administrative circles, and in Abstract XXXVIII. a table showing the prevalence of and mortality from these diseases in each quarter of the year.

The total number of admissions for these diseases amounted to 796 and the deaths to 10, being in the ratios of 78·1 and ·98 per 1,000 respectively. Compared with the corresponding figures for the previous year, the former is lower by 26·3 and the latter by 2·08 per 1,000. These affections taken together were less prevalent in each of the circles than in the former year, and show the highest admission rate of the four great circles to be in Sind as in 1881, this, however, is due to the prevalence of dysentery and diarrhœa in that division, the Presidency Circle showing the highest rate for hepatitis and liver abscess.

From the second table it will be seen that dysentery, diarrhœa, and hepatitis were most prevalent in the third quarter of the year, least prevalent in the first, and the second and fourth quarters, with about an equal rate of prevalence, occupy an intermediate position.

Diseases of the Urinary System.—The admission rate, 115·2 per 1,000, is less by 1·6 than in the previous year, and by 12·1 than the average. To gonorrhœa and its sequelæ are due 106·6 of this admission rate, a slight increase on the rate of admission for such affections in 1881.. Gonorrhœa was less prevalent in the Presidency and Mhow Circles, but more so in those of Poona and Sind. Other diseases caused 94 admissions, of which 8 were due to Bright's disease; there were no deaths.

Diseases of the Generative System, Cellular Tissue, and Organs of Locomotion varied very little in admission rate from the previous year, but one death occurred under the latter heading from lumbar abscess.

Diseases of the Cutaneous System, 67·2 per 1,000, show a decrease of 12·8; and a decrease of prevalence is noticed in each of the circles, but in the Sanitaria there was a slight increase.

CONDITIONS.—*Debility* caused 382 admissions or an admission rate of 37·5 per 1,000, being about one third lower than in the foregoing year; a decrease

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is noticed in all the four large circles, though not in Sanitaria and on the march.

POISONS.—Forty admissions are returned under this head and two deaths, equal to respective rates of 3·9 and ·19 per 1,000 as against 3·4 and *nil* in 1881. The cases comprised 22 of alcoholic poisoning, with one death, 16 of delirium tremens, also with one death, one case of sting of scorpion and one of snake bite, which recovered. The latter occurred at Mhow, a man was admitted having been bitten by a snake, he was in great danger for a time but eventually quite recovered. The reptile is supposed to have been a krait (bungarus cœruleus).

INJURIES.—Three admissions and 10 deaths are returned under the head of *general injuries*. Two of the admissions were for burns caused by an explosion of gunpowder; it happened at Mhow that, during gun drill, a blank cartridge exploded prematurely and injured two men, one not very severely, but the other received the fuller force of the explosion and was so severely hurt that he died in a few hours. The third admission was for lightning stroke, and also occurred at Mhow. A man was struck by lightning and knocked down; he suffered much from headache and nervous shock, but recovered in about three weeks. Seven deaths were due to accidental drowning, one to asphyxia by hanging (judicial), one to asphyxia (by vomit while drunk), and one to the gunpowder explosion above mentioned.

Local Injuries.—The admissions amounted to 1,125 and the deaths to 13, being in the rates of 110·3 and 1·27 per 1,000, both higher than in the previous year. The admissions were of a varied character. The deaths resulted from the following causes: concussion of the brain 1, fracture of the base of the skull 5, gunshot wounds (*suicidal*) 5, gunshot wound (*homicidal*) 1, and contusion with rupture of the liver 1. Of the 5 *suicidal* deaths from gunshot it is reported that in three cases the men were suffering from temporary insanity, in one the man was under the influence of strong feeling, having been ordered to do a duty he objected to, and in the other the motive was not known. No other case of *suicide* occurred.

Surgical Operations.—None are recorded.

Invaliding.—The total number of men invalided home during the year was 358, and of men finally discharged 149, being in annual ratios of 35·11 and 14·61 per 1,000 of strength less than the corresponding rates for the previous year by 17·36 and 4·12 respectively, and than the similar average rates for 10 years by 13·49 and 1·33 per 1,000. The causes of invaliding were fevers 16, rheumatism 8, secondary syphilis 11, phthisis pulmonalis 24, diabetes 1, anæmia 2, nervous diseases 41 (including 15 cases of mental affection), eye and ear diseases 17, heart diseases 39, aneurism 1, varicose veins 7, respiratory affections 16, digestive system 44 (including hepatic affections 27), debility 100, results of injury 11, &c.

Of those finally discharged the chief disabilities were secondary syphilis, tubercular disease, diseases of the circulatory, respiratory, and digestive systems, debility, and local injuries.

Abstract XXXIX. shows the admissions, mortality, and invaliding in each corps serving in the Command. Of the different arms of the service the cavalry shows the least sickness and mortality, but a higher rate of invaliding than artillery and infantry. The highest admission and death rates occurred in the infantry.

Abstract XL. shows the comparative mortality and invaliding in the three grades of commissioned officers, non-commissioned officers and men for the year under report, and for the 10 previous years. It will be seen that both in mortality and invaliding the highest rates are shown by officers as compared with non-commissioned officers and men. As compared with those for 1881 the death rates of non-commissioned officers and men show a decrease; and in invaliding a decreased rate has occurred in all three grades.

Officers.—In an average annual strength of 306 officers there were 206 attacks of illness and 6 deaths, giving the respective annual ratios of 669·9 and 19·61 per 1,000; the invaliding amounted to 49·02 per 1,000. Compared with the corresponding rates for the previous year there is a decrease in the rate of sickness of 5·2 per 1,000 in that of invaliding one of 21·04 per 1,000, but an increase in that of mortality of 6·88 per 1,000. The principal causes of illness were enteric fever 2 cases, remittent fever 2, other fevers 63, dysentery 4,

diarrhœa 8, hepatic affections 4, diphtheria 1, debility 6, and injuries 34. The six deaths were due to cholera, diphtheria, apoplexy, hepatitis, abscess of the liver, and debility, one case each. *Bombay.*

Women.—The average annual strength was 631 and the admissions to hospital, exclusive of 204 for childbirth, numbered 505; the deaths amounted to 14. The admission rate, 800·3 per 1,000, is less than that in 1881 by 86·1; and the death rate, 22·19 per 1,000, exceeds that in the former year by 1·54 per 1,000. Fevers caused 147 admissions, cholera 1, phthisis pulmonalis 12, respiratory affections 13, dysentery and diarrhœa 24, hepatic affections 11, debility 152, &c. Three deaths were due to phthisis and of the rest one each to the following causes: enteric fever, ague, cholera, puerperal fever, acute rheumatism, anæmia, syncope, dysentery, diarrhœa, hepatitis, and hepatic abscess.

Children.—In an average annual strength of 1,098 children there were 816 admissions into hospital and 67 deaths, being in the annual ratios of 743·2 and 61·00 per 1,000. Compared with similar ratios for the preceding year there is an increase of 98·7 in the admission rate and of ·27 per 1,000 in the death rate. The principal causes of admission were debility 111, measles 109, ague 104, conjunctivitis, 77, diarrhœa 74, and teething 69; also cholera 4 cases, and scarlet fever 3. The deaths were caused by teething in 13 instances, diarrhœa 11, convulsions and debility 7 each, croup 4, remittent fever 3, and cholera 2, &c.

SANITARY CONDITIONS.—The Principal Medical Officer, Surgeon-General G. Auchinleck, reports as follows on the sanitary condition of the different stations in the Command.

Colaba.—European infantry barracks. — "These barracks have been repeatedly condemned owing to their faulty construction and unhealthy situation; hence new barracks have now become a necessity. Notwithstanding the diversity of opinion as to the cause of the unquestionable unhealthiness of these barracks their site should be abandoned and advantage taken of the experience afforded by the site of the artillery barracks. The future structures should occupy, as far as possible, the ridge, and have good plinths; thus not only would the evil caused by the retention of the subsoil water in the immediate vicinity of the present barracks be done away with, but the barracks would be also considerably removed from the mangrove swamps, by many considered objectionable, which lie close to and to the west of the existing ones.

"*Artillery barracks.*—These are well adapted to the climate, they are built on good plinths, are airy and spacious, and provided with wide verandahs. These, with their subsidiary buildings, are in good repair, and occupy the best site in the place; they enjoy free circulation of air and natural surface drainage; thus, in their case, the evils of the dry rubble drains are minimised, but an improvement in these drains for carrying water from the bath rooms is most desirable. Permanent stone cemented drains should be made. The water supply is good and ample; the use of filters is strictly observed in barracks. The followers' lines and the bazar are in the immediate proximity of the barracks, which is objectionable, this, however, is owing to the limited space available. The situation of the station hospital, close to the rocks at the entrance to the harbour, is an objectionable low site, but when the contemplated improvements are taken in hand it will be built in a more suitable locality.

"*Deolalee.*—The barracks are in excellent order and well ventilated, but they are frequently insufficient to accommodate the troops passing through the depôt. Tents have to be pitched; hitherto the practice has existed of pitching several rows of tents between the barracks, causing an interruption to the free current of air. Much overcrowding in the latrines and washhouses has taken place and a generally insanitary condition has been the result. In future, however, no tents are to be pitched between the barracks, but a standing camp with semi-permanent latrines, &c. will be erected in a convenient situation in cantonment. The old Abyssinian huts used for officers' quarters have been repeatedly condemned, and are not fit for habita-

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" tion; it is however in contemplation to destroy them and erect more suitable " buildings. The hospital is well situated on an eminence about a quarter of " a mile from barracks; it is in good repair, but rather small for so large a " depôt, but as troops only pass through when the climate is excellent, tents " are used without detriment to the sick.

" *Belgaum.*—The sanitary condition of the cantonment is good. The " barracks are excellent buildings situated on elevated ground to windward of " the station. The hospital buildings are roomy and well situated between " the infantry and artillery barracks, and are complete in every particular. " I consider a great mistake has been made when erecting these buildings " in surrounding them with an unnecessarily high wall, and in placing so " large a mass of building as is formed by the guard room and quarters " of medical subordinates in such close proximity to the main building of " itself by which much air is shut out of the lower wards.

" The fort at Belgaum was reported to be unhealthy; the general officer " commanding caused careful statistics to be made of the relative sickness in " the cantonment and fort which go far to show that the impression which " existed of the latter being the more unhealthy of the two was not borne " out by facts."

Aden.—It is pointed out that Steamer Point facing the south west and being open at all times to the prevailing sea breeze is the most desirable spot for the establishment of a sanitarium where all the sick of the European garrison, including officers, could be sent for treatment. At this point also the want of a hospital for the treatment of natives has been much felt, and it is stated that this want will be increased, as sappers and miners are to be quartered there in future.

It having been supposed that cholera originated in 1881 in the neighbouring Somali village of Maala, it was considered advisable to have this village removed to a distance; this was carried out in May 1882, and the population now reside some eight miles from Maala.

Two wants are shown to exist in the garrison of Aden. One is that a gymnasium of some kind should be provided; and the other that some suitable place for the accommodation of insanes should be formed, for as only one troopship calls at Aden during the season, great inconvenience is caused and much risk in keeping men so afflicted in an open hospital for often months together before they can be deported.

Mhow.—The barracks and hospital buildings are in a good state of repair and their sanitary arrangements properly attended to. The water supply, which was the subject of special inquiry in 1882, is thus reported on. " The " water supply for the troops is taken from wells situated at a lower level " than the barracks, which stand on a ridge having a dip in the other " direction to the bazar. They are fed by the rain water falling on around " and below these public buildings. Each is surrounded by a parapet and " cased around the immediate surface, the waste water being drained off to " some distance. The water passes through trap rock, an inefficient filter " and liable to fissures. Analysis of the well water used by the troops for " drinking purposes was made and the water reported to be good, but that " of the bazar was decidedly unfavourable. The troops do not appear to have " suffered materially from diseases due to organic contamination of water.

" *Asirgarh.*—During the year the health of the troops forming the garrison " has been good and the number of admissions for ague less than in former " years. The water supply is dependent on the rainfall which is collected in " three large tanks and carefully protected from pollution; the quality, how- " ever, is only fair, but it is rendered comparatively pure by being passed " through filters, the use of which is strictly enforced. A site has been " selected for a female hospital, and another outside the fort for the erection of " an infectious ward."

Mount Abu.—It is stated that this sanitarium possesses great climatic advantages, and that there is ample building space, so that it is most desirable that it should be utilized to a greater extent than has hitherto been the case.

The barracks, water supply, and general sanitary arrangements are satisfactory. Convalescents improved steadily in health during their stay. *Bombay.*

Neemuch.—The barracks, hospital, and sanitary arrangements are satisfactory, but during the year under report the European troops suffered most severely from malarious fever. The following remarks by the medical officer in charge show that "the site of the barracks occupied by the European "troops is an eminently malarious one. To the west is the Seora tank, from "which the wind frequently blows directly on to the barracks, and which, "during and after the monsoon, is situated in a swamp. After the rainy "season has passed this tank dries up with marvellous rapidity, the amount "of evaporation, which under the influence of a tropical sun must result, is "very great indeed, and is a fertile source of fevers of a periodic type. Again, "to the north of the barracks is a large tract of land which is always un-"doubtedly a source of malaria. The broken ground in the vicinity of the "principal nullahs must also, particularly after a heavy rainfall, exhale "malaria in the superficial drains which permeate the barracks in every "direction. The water is quite close to the surface during and immediately "after the monsoon."

Nasirabad for a long time was considered one of the most unhealthy stations in the Presidency, but of late years its character has improved, though intermittent fever at certain seasons is still very prevalent.

An improvement in the water supply is reported; the scheme of bringing water into the station from the Danta and Bir lakes has been partially carried out, and hopes are entertained that all arrangements for supplying water from these sources will be soon entirely completed.

Baroda.—"The barracks at this station are very faulty and ill-constructed. "Much correspondence has taken place regarding the construction of new "ones, but as is the case with other stations the schemes for replacing these "unsatisfactory buildings still hangs fire, and until new barracks are built, the "health of the troops, which has never been quite satisfactory, is not likely to "improve."

The sanitaria of Teethul and Taragarh are reported to have had a most beneficial effect on the invalids sent there from the stations of Baroda, Ahmedabad, and Nasirabad respectively.

Hyderabad.—The barracks, hospital, water supply, &c. are favourably reported on. "The ablution rooms are being enlarged and a good drain to carry off "the waste water is in process of construction, this will remedy an evil which "has been complained of.

"*Poona.*—The Wanowrie barracks were occupied during the year. The "health of the troops has been good. Water is brought by pipes from the "Karakwasla reservoir; the supply is good and plentiful. The drainage is "good and conservancy efficiently carried out." Ghorpuri barracks were unoccupied, and it is said that owing to their unhealthiness they should never again be used by British troops except under emergency.

"*Satara* is one of the healthiest stations in the Presidency. It owes this "to its fine situation and naturally favourable surroundings. The barracks "and accessory buildings are good, the drainage good, a number of new drains "having recently been made. Cases of cholera occurred within a few miles of "barracks, but none in their immediate vicinity. The hospital is too small, "and a female hospital is required. Water of a fair quality is easily procured "from wells in camp. Conservancy arrangements carefully attended to."

Khandalla is well adapted for a sanitarium for troops during the hot season. The barracks, hospital, water supply, and conservancy are well reported on. It is stated, however, that this station, on account of its excessive rainfall, ought never to be occupied by troops in the monsoon.

Purandhur is also an admirable sanitarium for European troops, and its sanitary condition is satisfactory.

"The year under review was marked by one distinguishing feature, viz., "the change from the regimental hospital system to the station hospital

Bombay.

" system. This was partially commenced on the 1st January, but did not come " into full working order until the 1st April. No difficulties whatever were " experienced in starting the new system, and the reports from all the circles " in the Presidency state that it has continued to work satisfactory up to the " present time.

"Another event of importance in the year was the despatch from Bombay " of the whole of the Egyptian Expeditionary Force which was sent from " India. This was done without a hitch of any kind. All the medical " equipment was furnished from the stores in Bombay, and was put on board " the transports under the personal superintendence of the Deputy Surgeon- " General of the circle, who spared neither pains nor exertions in making all " the arrangements complete and perfect."

XIII.—ON THE HEALTH OF THE TROOPS SERVING IN EGYPT.

Sickness and Mortality.

Egypt.

An expedition having been ordered to Egypt in consequence of the rebellion of Arabi Pasha against the authority of the Khedive, troops were sent from England as well as a contingent from India.

The date of the first arrival of troops in Egypt was the 17th July, from which time until the close of the year British troops were resident in that country.

The course of the campaign is well known, and its medical history has been fully described by Deputy Surgeon General Sir J. Hanbury, K.C.B., Principal Medical Officer of the Expedition; and by Deputy Surgeon General J. A. Marston, in their reports published in the Appendix to the Army Medical Department volume for 1881. It will be remembered that hostilities ended on the 9th October, when the Expedition ceased to be an army in the field, but became an army of occupation, and as such remained until the end of the year.

The period of residence of British troops in Egypt in 1882 therefore naturally divides itself into two parts, the first that of hostilities from 17th July to 9th October inclusive, and the second that of occupation from 10th October to 31st December.

The average strength of non-commissioned officers and men during the period of hostilities is returned by the Principal Medical Officer as 13,013, and that during the period of occupation as 13,931, from which numbers the equivalent average annual strength is found to be 6,198.

The number of admissions to hospital during the campaign was 7,590; of deaths, including those of 60 invalids who died within the period, 232, and 2,321 men were transferred to England, Malta, or Cyprus. The annual ratios per 1,000 were, therefore, for admissions, 2504·9; for deaths, inclusive of those killed in action, 76·57; and for invaliding, 766·01.

During the remainder of the year the admissions were 6,802 in number; the deaths, including those of 86 invalids (many of whom had left the Command during the period of hostilities), 319, and 908 men were invalided home, the annual admission rate being 2147·1 per 1,000, the death rate 100·69, and the invaliding rate 286·61 per 1,000. The average number constantly sick, 301·97, gave an annual rate per 1,000 of 95·32.

The total admissions for the whole period numbered 14,392, or at the annual rate of 2322·0 per 1,000. The total number of deaths was 551, equal to an annual rate of mortality of 88·90 per 1,000, and the total number invalided, 3,229, equals an annual rate of 520·97 per 1,000.

The subjoined table gives the principal health statistics for the periods of hostilities and of occupation separately as well as of the whole period embraced in this report.

With regard to the invaliding, it must be borne in mind that the principle of evacuation of the sick and wounded was followed in the late war, and was carried out to a greater extent than would have been the case under other circumstances, in consequence of its being known that the force would be greatly diminished at the close of the campaign, and that there was therefore no object in retaining sick soldiers in Egypt.

Egypt.

—	Period.	Average Strength.	Admissions.	Deaths.			Invalids sent home.
				In the command.	Of Invalids.	Total.	
Egyptian Expeditionary Force.	17th July to 9th October.	13,013	7,590	172	60	232	2,321
Army of Occupation	10th October to 31st December.	13,931	6,802	233	86	319	908
	17th July to 31st December.	13,466	14,392	405	146	551	3,229

(*continued.*)

—	Period.	Ratios per 1,000.			Annual ratios per 1,000.		
		Admissions.	Deaths.	Invalids.	Admissions.	Deaths.	Invalids.
Egyptian Expeditionary Force.	17th July to 9th October.	583·3	17·83	178·36	2504·9	76·57	766·01
Army of Occupation	10th October to 31st December.	488·3	22·89	65·18	2147·1	100·69	286·61
	17th July to 31st December.	1,068·7	40·92	239·78	2,322·0	88·90	520·97

The admissions and deaths in the different classes and orders of diseases are shown in Abstract No. XLI.

General Diseases.—The total number of admissions for diseases of the *febrile group* was 3,641, the annual admission rate being 587·4 per 1,000. Of these, 1,191 of the attacks occurred during the campaign, and 2,450 in the rest of the year, the annual ratios for the periods being 393·0 and 777·4 per 1,000 respectively. The deaths were 33 in the first period and 163 in the second, to which must be added those of 57 invalids who died after leaving the country, making a total of 253, or an annual rate of mortality from fevers of 40·82 per 1,000.

Eruptive fevers were represented by three cases of small-pox, two of which occurred at Cairo and one at Alexandria; none of them were fatal.

Continued Fevers.—The sickness from these fevers was largely increased by, and the mortality from them mainly due to, the great prevalence of enteric fever.

Enteric Fever.—575 admissions in all are returned, being in the annual ratio of 92·8 per 1,000, and 223 deaths occurred, including those of 51 invalids, the annual rate of mortality was therefore 35·98 per 1,000. The per-centage of deaths to admissions was 38·78. Of the total number, 118 cases and 27 deaths took place during the period of hostilities, and the remainder, 457 admissions and 145 deaths, in that of the occupation.

Enteric fever occurred first at Ramleh, then at Ismailia, subsequently among the troops on the Ismailia-Cairo line, and at Cairo itself, but did not culminate until after the close of the campaign, when it was very prevalent, particularly in November and December.

After the troops were housed in decent quarters, and the sanitary conditions were improved, the disease abated in prevalence. *Egypt.*

Other fevers of this class, simple continued and febricula, caused in all 2,606 admissions and 7 deaths. The admission rate for the year amounted to 420·4 per 1,000. These fevers were much more prevalent in the latter period—that of the army of occupation—than in that of the campaign. It appears probable also that certain of these cases were in reality enteric fever of a mild type, and were not correctly returned.

Further reference will be made to this subject at the close of this report.

Paroxysmal Fevers.—447 admissions are returned with 20 deaths, inclusive of those of four invalids. The annual rates are therefore 72·1 and 3·23 per 1,000 respectively. There was but little difference in the rate of prevalence in the two periods. Out of the total number of cases, 252, and all the deaths, were due to remittent fever, three fifths of these attacks occurred during the campaign, the remainder in the latter part of the year; while of 195 cases of ague two fifths occurred during the campaign, the remaining three fifths in the period of occupation. The prevalence of these fevers was doubtless influenced by the considerable changes of temperature that occurred, particularly the fall in the early morning with sometimes heavy dews. Other febrile disorders caused only 10 admissions and three deaths, including two of invalids from diphtheria (one at Malta, and one after arrival in England). The admissions during the campaign were three for erysipelas and one for pyæmia, the latter occurred in Alexandria, and was not the result of a wound received in action; all these cases did well. During the rest of the year there were also three cases of erysipelas, and one of pyæmia, which in this instance proved fatal. The other two cases were influenza and mumps.

Constitutional Diseases.—*Rheumatism.*—241 admissions in all took place, being at the annual rate of 38·9 per 1,000. During the campaign there were 127 cases, 103 being of the acute form, many of these were not severe, and though invaliding resulted; in some cases there were no deaths. Of the 114 cases that occurred during the period of occupation, 51 are returned as acute rheumatism, the remainder of the chronic and muscular forms.

Syphilis.—The admissions for primary syphilis in the first period of the residence of troops in Egypt were 291 in number, and for secondary syphilis 22, being in the annual ratios of 96·0 and 7·2 per 1,000 respectively. In the second period the admissions for the two forms numbered 495 and 43, or at the annual rates of 156·2 and 13·9 per 1,000. Taking the whole period, the annual admission rate for primary syphilis was 126·8 and for secondary 10·5 per 1,000. Including gonorrhœa and its sequelæ, the annual admission rate for all forms of venereal disease amounted to 190·4 per 1,000. The prevalence of these diseases was marked especially latterly: this condition could hardly be otherwise considering the absence of any regulation to prevent disease. It is stated by Deputy Surgeon General Barnett, C.I.E., that after a time a "lock hospital "was established, but its usefulness was limited, as the women belonged to "so many different nationalities, and the Egyptian Government has no control "over European prostitutes."

The admissions for tubercular diseases numbered only 28 in all, and the deaths seven, including those of four invalids. The annual rates of admission and mortality are 4·5 and 1·13 per 1,000 respectively. Phthisis pulmonalis was the cause of all the deaths.

Other constitutional diseases numbered seven, being three of scurvy or purpura, three of anæmia, and one of dropsy.

Local Diseases.—*Diseases of the Nervous System.*—The admissions for these affections in the first period were 186 in number and in the second only 33, being in the respective annual ratios of 61·4 and 10·3 per 1,000. The marked difference in the rate of admission in the two periods is due to the great number of cases of sunstroke which occurred during the campaign, owing to the great heat, combined with exposure and fatigue, when 171 cases are returned. The mortality, however, was small, only three deaths occurring, the annual admission and death rates for sunstroke alone during the campaign were 56·4 and ·99 per 1,000 respectively.

Taking the admissions for all nervous diseases in both periods, we get an annual rate of admission of 35·3 per 1,000, and taking the deaths for all forms, nine in number, including five of invalids, a death rate of 1·45 per 1,000, the

Egypt.

causes of death were sunstroke in six cases, and encephalitis, tetanus, and dementia, in each one case.

In *diseases of the eye*, the annual admission rate, 377·9 per 1,000, of the period of the campaign is markedly in excess of that of the period of occupation, 196·0 per 1,000, the admissions being 1,145 to 621. During the campaign conjunctivitis and tarsal ophthalmia caused no less than 1,139 admissions. The Principal Medical Officer states that "the admissions were trifling "until after the battle of Tel-el-Kebir, when the march to Cairo, with its dust "and dirt, encouraged the development of these affections. The disease in a "number of cases assumed a purulent character and in some instances was of "great severity. But by the vigilant and unremitting attention of the "medical officers and the remedial measures applied, the disease may be said "to have been literally stamped out in a comparatively short period and in no "instance has their been loss of sight." The annual admission rate for all forms of ophthalmic disease in the whole period amounts to 284·9 per 1,000.

Diseases of the Circulatory System.—Both during the campaign and in the subsequent period of occupation admissions for these diseases were but few, and for the whole time numbered only 52, or 8·4 per 1,000. The deaths were two in number, or ·32 per 1,000, and were due, one to valvular disease and the other to fatty degeneration of the heart.

Diseases of the Respiratory System caused in all 230 admissions, being at the annual rate of 37·1 per 1,000. During the campaign 63 admissions took place, the remainder occurring subsequently. Pneumonia caused 35 admissions and 8 deaths, and bronchitis 133 and 2 deaths.

Diseases of the Digestive System.—The admissions under this head were very numerous, both during the period of hostilities and during that of occupation, being 2,725 and 1,865 respectively, or at the annual rates of 899·3 and 588·7 per 1,000. The deaths were 31 during the war and 44 subsequently, to which must be added those of 55 invalids who died after leaving the country, making a total of 130 deaths in all under this head. The annual rate of mortality amounts to 20·98 per 1,000. These high rates are principally due to the great prevalence of diarrhœa and dysentery. The following table shows the admissions and deaths from these diseases, which occurred in the country, together with the annual ratios per 1,000, both during the campaign and during the subsequent occupation, as well as of the whole period under report.

Period.	Average Strength	Admissions.		Deaths.		Annual ratios per 1,000.			
						Admissions.		Deaths.	
		Dysentery.	Diarrhœa.	Dysentery.	Diarrhœa.	Dysentery.	Diarrhœa.	Dysentery.	Diarrhœa.
Of Campaign - 17 July to 9 Oct.	13,013	698	1,791	21	8	230·3	591·9	6·93	2·64
Of Occupation - 10 Oct. to 31 Dec.	13,931	492	875	34	2	155·3	276·2	10·73	·63
Total -	13,472	1,190	2,666	55	10	191·9	430·1	8·87	1·61

To the number of deaths from dysentery must be added those of 47 invalids who died after leaving the Command, and to the deaths from diarrhœa those of 3 invalids, bringing up the total deaths from dysentery to 102, and of diarrhœa to 13, the total annual ratios of mortality being 16·45 and 2·09 per 1,000 respectively. The prevalence of these affections was due, particularly during the campaign, to the combined effects of great heat and change of temperature, inferior drinking water, indifferent rations, especially bread, and to the great amount of fatigue and exposure undergone by the troops. Many were rendered inefficient during the campaign by these affections only, 717 men being invalided to Malta or England. Of the remaining diseases of the

digestive system the principal causes of admission were hepatic affections, jaundice being very prevalent in the later months of the year; it caused 275 admissions in all. Death was caused in 8 instances by hepatic affections (including 4 invalids with hepatic abscess), in 5 by peritonitis, and in one each by enteritis and gastritis. *Egypt.*

Diseases of the Urinary System.—Gonorrhœa and its sequelæ caused in the whole period 288 and 41 admissions respectively, being in the annual ratios of 46·5 and 6·6 per 1,000. Contrary to that which obtained with regard to syphilis, the admissions for gonorrhœa before the 9th October exceed those which occurred subsequent to that date, the numbers being 158 and 130, or at the annual rates of 52·1 and 41·0 per 1,000 respectively. Other diseases of this order caused 28 admissions, or 4·5 per 1,000, and one death, that of an invalid, and was due to Bright's disease.

Diseases of the Generative System, Organs of Locomotion, and Cellular Tissue show annual admission rates of 9·7, 5·5, and 30·6 per 1,000 respectively. None of these orders need special remark.

Diseases of the Cutaneous System.—The admissions amounted to 419, equal to an annual rate of 67·6 per 1,000. During the campaign the admissions were much more numerous than in the subsequent period, being 260 to 159, or annual rates per 1,000 of 85·8 and 50·1. This is probably due to the dirt and exposure and difficulty of ablution to which the men were subjected during the period of hostilities. Ulcers, boils, and eczema were the principal causes of admission; the latter disease was somewhat prevalent, and a few of the cases severe and intractable in character, necessitated invaliding.

DEBILITY.—Under this head 738 admissions in all, equal to an annual rate of 119·1 per 1,000. During the campaign the admissions numbered 446, being in the annual ratio of 147·2 per 1,000; the great majority of the cases were invalided. Subsequently 292 admissions, or 92·1 per 1,000 annually, were returned. The proportion requiring invaliding was, however, less, there being greater facilities as well as more time for treatment of the cases. Eight deaths are returned, including one of an invalid.

POISONS.—During the period of occupation seven admissions, resulting from the abuse of alcohol, took place. One death happened from delirium tremens.

INJURIES.—*General.*—One admission for burns and scalds occurred at Alexandria. Nine deaths in all took place, two from multiple injury at Alexandria, and seven from asphyxia by drowning, of which one case occurred at Ismailia, two at Alexandria, two at Cairo, and two at sea, the men being invalids on their way home; one of the last-named cases was *suicidal.*

LOCAL INJURIES caused 476 admissions altogether in the period under report, the annual rate per 1,000 being 76·7; the deaths were 8, or at the rate of 1·29 per 1,000 annually. During the campaign the admissions were 313 and deaths 2, and afterwards, up to the 31st December, the admissions numbered 163, and deaths 6. In both periods contusions, wounds, and sprains caused the majority of admissions; fractures caused 24, and dislocations 12. The deaths were caused by fracture of the skull in four instances, three at Cairo and one at Alexandria, at which place also occurred a death from concussion of the brain, one from contusion with rupture of abdominal viscera, the result of a fall, and one from a shell wound, which had been received some time previously at the fire at Cairo Railway Station. At Ismailia a death took place from gunshot wound of the head, believed to be *suicidal*; the man, a sergeant in the Commissariat and Transport Corps, was found in his tent shot through the head and his revolver lying beside him.

Injuries received in Action.—The total number of admissions into hospital from injuries received during the campaign was 378, or 29·0 per 1,000 of the average strength for that period, or in an annual ratio of 124·7 per 1,000. The deaths during this period, numbered 93, inclusive of 82 killed in action; the rate per 1,000 of strength being 7·15, or in the annual ratio of 30·69 per 1,000. To the deaths must also be added those of 20 invalids, making a total of 113.

Compared with the average annual strength of the troops in Egypt for the whole period under report we find that the annual admission and death rates for wounds and injuries received in action, amount to 61·0 and 18·23 per 1,000 respectively.

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The classified return of wounds and injuries received in action is shown in the report on the Medical History of the Campaign in Egypt by Deputy Surgeon General Sir J. A. Hanbury, K.C.B., Principal Medical Officer, in the appendix to the last Army Medical Department volume. Of the 378 cases admitted, 11 died in the Command, 111 recovered and returned to duty, and 256 were invalided, out of which number 20 died.

Surgical operations.—In Sir James Hanbury's report above alluded to will be found a table of operations performed in Egypt or elsewhere, resulting from wounds or injuries received during the campaign. The total number performed was 47, of which 9 proved fatal, 2 required further operation, and 36 recovered. They comprised three amputations at the shoulder joint, with successful result in two cases, five of the arm, and one of the forearm; all successful. Of the thigh there were four amputations in the upper third, of which two died and two recovered; two of the middle third, one of which died and the other required further operation; and two of the lower third, one being fatal and the other successful. At the knee joint there was a successful case of amputation of both legs and also one of one leg. An excision of the shoulder joint was performed with satisfactory results, but one of the hip joint was unsuccessful, and the patient died. The femoral artery was ligatured three times, one death resulted, and the popliteal twice, also with one death. In addition to the above were various minor operations, extraction of bullets, &c.

Subsequent to the campaign an amputation at the middle third of the thigh was necessary on account of injuries received by the explosion of gunpowder at Cairo Railway Station; secondary hæmorrhage ensued, and sloughing and exposure of the end of the bone; a secondary operation was performed, but pyæmia followed and death ensued.

Invaliding.—The total number invalided, 3,229, caused an annual ratio per 1,000 of 520·97. The very high rate of invaliding is of course due to the pressure that existed during the campaign, and the necessity for the evacuation of the hospitals to the ships to make way for sick and wounded coming from the front; many being sent home who, had there been time and place, would have in due course recovered in the country. The principal causes of invaliding were as follows: febrile diseases 429 (including 71 enteric), constitutional affections, 196 (including rheumatism 72, syphilis 108, and tubercular disease 12), diseases of the nervous system 75 (sun-stroke 61), of the eye 380, of the digestive system 1,087 (comprising dysentery 436, diarrhœa 584, hepatic affections 27, &c.,) and of the cutaneous system 58. Debility shows 485 invalided, local injuries 79, and, as already shown, 256 were invalided for injuries received in action, 49 men were finally discharged within the period, 23 on account of disabilities resulting from injuries in action, 146 deaths of invalids took place after leaving Egypt, either at sea, Malta, or after arrival in England. The causes and numbers were as follows: enteric fever 51, remittent fever 4, diphtheria 2, phthisis pulmonalis 4, sunstroke 3, dementia 1, tetanus 1, pneumonia 1, gastritis 1, dysentery 47, diarrhœa 3, hepatic abscess 4, Bright's disease 1, debility 1, asphyxia by drowning 2, and the results of injuries received in action 20.

Officers.—The average strength of officers during the campaign is returned as 541, and that during the period of occupation to the close of the year as 430; the average strength for the whole period was therefore 486, and the average annual strength 224.

The number of admissions to hospital during the campaign was 253, being at the rate of 467·6 per 1,000 of the strength, the number of deaths, including 10 killed in action was 14, or at the rate of 25·87 per 1,000, and there were 192 officers, or 354·9 per 1,000, invalided home. Subsequent to the campaign up to the end of the year, the admissions of officers were 227 in number, being at the rate of 527·9 per 1,000, there were 3 deaths, or at the rate of 6·97 per 1,000, and 29 or 67·4 per 1,000 were invalided. Taking the whole period under report the admissions, 480, were at the rate of 987·6 per 1,000 of the average strength, and at the annual rate of 2142·8 per 1,000; the deaths, 17, were at the rate of 34·97 per 1,000, the annual rate of mortality being 75·89 per 1,000; 221 officers invalided were at the rate of 454·7 per 1,000 of average strength of the period, or at an annual rate of 986·6 per 1,000.

Continued fevers caused 84 admissions in all, 28 during the campaign and 56 subsequently, out of which enteric fever furnished 2 and 17 respectively, the

remainder being due to simple continued fever and febricula; one death occurred from enteric fever. The prevalence of enteric fever among officers as compared with the men was very little less, the annual ratios of admission being respectively 84·8 and 92·8 per 1,000. Paroxysmal fevers caused 29 admissions, 10 for ague, and 19 for remittent fever; there were no deaths; 35 officers were invalided for different forms of fever. *Egypt.*

During the campaign sunstroke, as it did among the men and from similar causes, gave rise to a comparatively large number of admissions, viz., 30, or at the annual rate of 238·1 per 1,000, which is higher than that among the men; 26 officers were invalided home for this cause.

Affections of the eye, on the contrary, were very much less prevalent than among the men, the admissions in the whole period only amounting to six; this was doubtles due to the exercise of greater care and cleanliness on the part of the officers, as well as to better sanitary conditions as regards housing, and absence of overcrowding. Respiratory affections caused but 4 admissions, one case proved fatal from pneumonia. Dysentery and diarrhœa were very prevalent, 40 cases of the former and 49 of the latter occurring during the campaign, and 8 and 39 respectively subsequent to it; 78 officers were invalided in consequence of these affections. Hepatic affections, particularly jaundice, were rather frequent latterly, 37 cases being returned, of which 24 were jaundice.

52 officers were admitted for injuries received in action during the campaign, equal to a rate of 96·1 per 1,000, or an annual rate of 411·9 per 1,000; 2 died from gunshot wounds; 48 were invalided to England, and 2 returned to duty. 10 officers are returned as killed in action.

Sanitary Conditions.—In the Sanitary Report on the Egyptian Expeditionary Force by Deputy Surgeon General J. A. Marston, already alluded to, the sanitary conditions under which the troops were during the campaign, are fully described. It is only necessary, therefore, to add that subsequently every effort was made to improve the sanitary conditions of the different camps and quarters, and to render the barracks and permanent buildings of the country fit for the occupation of European troops, a matter involving an enormous amount of labour, care, and supervision.

General Remarks.—Even before the expedition landed in Egypt it was confidently predicted that enteric fever would form a very important element in the medical history of this as of other wars.

Be the causes of enteric fever what they may, this disease has been one of the scourges of modern wars; more especially of those undertaken in the hot and autumnal seasons of tropical or sub-tropical latitudes.

There can be little or no reasonable doubt that what is now known as enteric fever prevailed before the various fevers were differentiated one from the other, and therefore before the modern classification of these forms of disease had been adopted; its pathology not being definitely established, it was not recognised, but it was included in and went to swell the fever mortality rate. But there are grounds for supposing that changes in the constitution and organisation of modern armies have greatly tended to increase the prevalence of this disease. Armies are composed of younger and less acclimatised men than they were. Under a short service system a large body of men of the ages most liable, in all countries, to enteric fever are being subjected also to another predisposing cause of this fever, in that they have periodically to undergo those constitutional or physiological changes commonly called acclimatisation, or the vicissitudes of field service in tropical or sub-tropical climates.

Although a young and short-service army is thus especially liable to certain types of disease, such as enteric fever, as compared with an army composed of older men, it is to be remembered that the ratio of mortality increases in all classes with increasing age; and in a military population this is notably the case. The soldier, as a rule, ages more than other men, and the value of life diminishes so rapidly with advancing years that in the past the survival of the fittest in the person of the hale veteran represented a large death rate among his comrades of middle age.

Ample experience has proved that it is during the first years of residence in a hot or tropical country that the soldier is so susceptible to be attacked with

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enteric fever, and campaigns conducted in the summer and autumn are almost certainly followed by the appearance of this disease, the only uncertainty being the extent of its prevalence.

In Egypt the disease manifested itself very early in the campaign, although the cases were very rare at first; it gradually increased, but it was not until the army became an army of occupation and at the end of the year that the disease culminated in a serious epidemic.

The native regiments forming part of the Indian contingent, as well as the European portion of that force, may be said to have practically enjoyed an immunity from enteric fever, although exposed to the same conditions as the British part of the Expedition, indicating the favourable influence of race and previous acclimatisation. Some of the cavalry corps suffered disproportionately from enteric fever; and its prevalence and severity among the various corps and arms of the service had an unquestionable connexion with the amount of their exposure and work—the greater this was the greater was the amount of fever amongst them.

There is no need to go further in search of an explanation than a bare recital of the conditions under which the army was necessarily placed. The soldiers were mostly young men; they were new arrivals in the country, and therefore, as Andral pointed out half a century ago, they formed a very susceptible element.

The campaign was in the hot months of August and September; it was very arduous and involved much exposure. In the space of 25 days from its disembarkation at Ismailia, the army had marched across the hot desert, fought, and occupied Cairo. The only water supply on which the troops had to depend was euphemistically called the "Sweet Water Canal." It was at all times and from the first a very turbid, dirty-looking water, containing much organic matter and open to pollution from various sources; and from the 30th August to the 13th September (when a bund across the canal was cut by us after the battle of Tel-el-Kebir) the amount of water had so much diminished that it was too shallow to allow of barges passing along the canal. All the enemy's camps, and indeed every place that had been previously occupied by the Egyptians in the desert, and held or traversed by the troops on the march to Cairo, were in a very foul and unsanitary state from various causes. The ration bread was of bad quality; the meat was either preserved meat or, when fresh, necessarily tough and innutritious. From these causes the army was, no doubt, in a physically depressed state when it reached Cairo and the excitement of the campaign was over.

On the unsanitary state of Egypt generally or of Cairo in particular, there is no need to dwell, as subsequent events in connexion with the epidemic of cholera in 1883 demonstrated that all the conditions necessary for the development of epidemic disease were present in that country. Every available barrack and public building in Cairo and in Egypt generally was in so foul a state as to be uninhabitable by Europeans, and it was impossible to find any unobjectionable camping ground affording sufficient space with water supply available that was not, for military considerations, too far distant from Cairo itself. The troops had to be encamped on the only available sites, and, as might be expected in so rapid a campaign with a very limited amount of transport, there was much delay before their requirements could be adequately met.

The events making up the medical history of an army in the field develop themselves with a regularity that is almost monotonous. Looseness of the bowels, under the name of camp diarrhœa, begins to be common almost as soon as the army takes the field; this is in a large number of cases compatible with apparently good health, and is doubtless attributable to the changed condition of life; soon cases of fever appear, some of very brief duration, which are classified as heat-fever, and some attended with diarrhœa, marking the commencement of enteric fever in the force. The development of this disease and the proportions it will assume will be merely a question of time and circumstances. The disease embraces every variety from the mildest to the severest types, from the so-called ambulant to the most fatal forms. The instances in which this fever occurs as a relapsing typhoid properly so-called with an invasion fever period, followed by one or more febrile recurrences, in which all the characteristic phenomena are repeated with intervals of apyrexia

between them, are also not at all uncommon. The disease also occasionally runs so mild a course as to resemble a febrile dyspepsia, and then the thermometry of the fever either fails to be recognised at all, or at any rate fails to be recorded with any degree of accuracy. On field service and in a rapid campaign this must be so; and it is as impossible to say when the disease began as to give anything like an accurate numerical expression of its extent. One thing is certain, however, that the tabulated number of admissions falls very far short of the number of cases that have really suffered from enteric fever in any campaign. During field service in the hot weather the exhaustion from the climatic heat is superadded to that of the fever-heat attending the disease itself, and to the fatigues and exhaustion inseparable from a campaign; and those attacked have probably to be transported to a distance at a time when perfect rest is required and forms an essential part of treatment. These are factors which must, one and all, swell the mortality from this disease. Still, there can be no doubt that the high ratio of mortality from enteric fever is mainly attributable to the fact that only the severer and more pronounced forms are diagnosed and returned as enteric fever under the circumstances of field service. It is to be borne in mind, too, that in actual practice in warm climates and under the conditions of field service this fever does not invariably conform to the temperature ranges which have been far too arbitrarily laid down by medical authors; for a fever may be non-conformable to such ranges and yet be indubitably enteric fever. *Egypt.*

The long period of incubation exhibited in many instances by patients suffering from this fever is worthy of being put upon record. For instance, the brigade of Guards left Alexandria at the end of October and in the first week of November (from the 30th October to November 2nd), and cases of typhoid fever continued to be admitted for nearly nine weeks after that date. Even supposing that the disease was contracted on shipboard the incubation is a long one. That the disease was of Egyptian origin, and was not due to infection from one to another in this country, seems highly probable, because the spread of it was confined to those who had been in Egypt.

It would be impracticable here to enter on the causes that have been assigned by pathologists for this disease.

As far as Egypt is concerned, all the conditions were present for the operation of all or any of the assigned etiological causes. The troops also suffered from heat, hard work, fatigue, and foul water. The subject is one, however, of immense importance to the army surgeon, for it is sufficient for a disease to be classified as preventible to lead to the natural and logical conclusion that it should have been prevented; and here it may be well to advert to the conditions of field service as affecting the general health and conditions of an army.

Assuming that the range of all the modifiable conditions affecting health be ascertained, which is not yet the case, we are at once met by the question as to how far this range is practically modifiable in a campaign—that is, how far preventible diseases can be prevented.

In Egypt to have made sanitary reconnaissances in advance of the force to fix on camps, &c., would have led to the destruction of those who carried out those services, and certainly it would have entirely frustrated the plan of the campaign itself, for secrecy was the essential element to its success, and instead of Tel-el-Kebir and the march to Cairo, the army might still be in the desert. A conservancy power adequate to the prompt cleansing of the buildings and grounds in Egypt (and it must be prompt to be of any service), would have required a force nearly as large as the army itself—on so vast a scale were the sanitary requirements. There was but one, and that a very bad and impure source of water supply for the army on the march through the desert. To have filtered it for that force would have required a very extensive filtering machinery to have been dragged through the desert and in advance of thirsty troops on the march, where the soil is a yielding sand, and the amount of animal and rail transport was insufficient for other and more pressing needs.

After the force ceased to be considered an army in the field and became the army of occupation, there is no doubt there was a deficiency of clothing, bedding, and other articles ordinarily available for troops encamped or in quarters, but to have supplied such on a scale commensurate with the requirements of the occasion pre-supposes that very large reserves of such stores should have

Egypt.

been sent out to Egypt and been present in some magazine at Ismailia, Alexandria, or elsewhere, so as to have been at once available—a matter of much difficulty under the circumstances of the late campaign.

Of course every attempt should be made in the way of prevision and provision to meet the requirements of an army in the field, and the foregoing statement of facts has not been made to detract in any way from our efforts in this respect, but simply to point out some of the conditions under which war is waged.

So far as the medical aspects of the campaign in Egypt are concerned, the results were remarkably good. For example, out of 171 cases of sunstroke and heat exhaustion caused by the newly-landed troops having to march in the desert in the mid-day sun, only three died.

From the 17th July to the 31st December 1882, 1,766 cases of eye affections were admitted, and at the latter date only 24 remained; not a man lost his eyesight. The satisfactory progress of the wounded in Egypt was universally allowed. During the campaign itself, and up to the time that enteric fever became prevalent, the sickness was under 6 per cent.

Since the foregoing was written the "Archives de Médecine et de Pharmacie Militaires, 1883," published by order of the French Minister of War, has been received. The volume contains a report on the typhoid fever of the French Army of Occupation of Tunis, North Africa, in 1881, by M. Czernicki, Médecin-Major de 1ere classe.

The experience and facts related by M. Czernicki are so parallel with those of the late Egyptian Expedition, as detailed in the sanitary report of Deputy Surgeon General Marston, published in the appendix to the last volume of these reports, as to form a very interesting and important supplement to our own experience in Egypt (on the same littoral) in 1882–3.

In round numbers 4,200 men out of a strength of 20,000 were attacked with this fever; the strength is probably one third too low, no statistics or unreliable ones having been received from many detachments roughly speaking, one fifth of the entire force may be said to have suffered from typhoid fever.

It is remarked that all the columns on the march were more or less attacked, and almost every occupied point, whatever its geographical or topographical position, was invaded.

Importation played a certain, though limited, part. In the beginning of the campaign the 142nd Regiment of Infantry sent seven men to hospital, but before leaving France cases of enteric fever had constantly occurred in it since 1st January. This regiment was on the 21st April attached to the 3rd Brigade, the whole of which subsequently suffered severely. This brigade was broken up on the 18th June; different corps went to different places, all of which became affected in greater or less degree; but the other two brigades, which were never within 50 leagues of the 3rd and had no communication with it or with any troops contaminated by it, and which had no enteric fever history, after some time (40 days after disembarkation) began to show cases of enteric fever; in this case there was no contagion or prolonged incubation.

It is pointed out that the extension and generalisation of the epidemic must be attributed to other causes than importation and direct contagion.

Five causes are enumerated—the influence of climate, of infection from the soil, of heat and atmospheric influences, the youth of the troops, and the fatigue and privations undergone by them.

With regard to the effect of climate, attention is called to the fact that those regiments which came from the temperate climate of the north of France suffered much more severely than others, particularly than the Algerian troops, to whom there was little or no change of climate. (The influence of race may also operate in this case.) With regard to the influence of soil, the frightful dirt of the towns and villages, the absence of all public hygiene, and the state of the cemeteries are pointed out, together with the condition of the camping grounds.

All the reports of Medical Officers agree in remarking the manifest influence of heat on the evolution of the epidemic. All agree also as to the youth of the troops being a strong predisposing cause; at least a third of the men were under seven months' service.

There were 1,310 admissions to hospital per 1,000 of men with less than a

year's service, and out of 4,200 admitted for enteric fever, nearly half were of this class. *Egypt.*

The influence of fatigue and exposure was said to have been particularly marked in this expedition. Every battalion at rest improved in health, while every long march or reconnaissance during the heat was followed by marked recrudescence of disease.

The effect of precarious and innutritious food is also alluded to, together with the influence of "ennui and nostalgia," on the troops after the close of a campaign.

The different varieties, clinical character, complications and treatment of the disease, are then reviewed. With reference to the latter, the absence or inefficiency of hygienic conditions in a campaign is pointed out; the heat and insufficient ventilation of tents in which the sick were treated, and other difficulties which must occur in the field.

Evacuation of the sick is deprecated as dangerous by reason of the unfavourable conditions under which it must be effected, such as length of marches, bad or no roads, insufficiency of ambulance transport, and heat and exposure.

The number of deaths out of 4,200 sick is given as 1,039 (this number is probably too low, as it does not include deaths of men who had left the country) or in round numbers, about 25 per cent. The death rate from enteric fever was more than 75 per cent. of the total deaths from all diseases, being 1,039 out of 1,341, or 782 per 1,000.

The mortality varied greatly at different stations and at different seasons. For instance, at Kef 62·5 per cent. during the whole period from June to December, but 77 per cent. in July, August, and September.

Only one battalion coming from France was almost spared, the 128th Infantry, which had but five cases and one death. The general increase and variations of mortality agree with the causes alluded to in the remarks on the causation of the disease and appear to justify them.

The mortality by arms of the service gives some useful information. Taking the total strength of the army at 20,000, the typhoid fever mortality was 50·1 per 1,000, in the following proportions for the several arms of the service:—

Arm of Service.	Typhoid Mortality per 1,000.
Engineers	63
Transport	62
Cavalry	61
Infantry of the Line	59
Chasseurs à pied	50
Artillery	43
Zouaves	13
Hospital attendants	10
Tirailleurs	1·5

The highest mortality is said to have been in corps which were exposed to the greatest degree of infection, fatigue, privation, and climatic influence. The high death rate of the cavalry and transport corps is attributed in a great measure to the proximity, in their encampments, of the horses and beasts of burden, by which the soil becomes rapidly fouled.

In the infantry the effect of fatigue on young soldiers is mentioned as a prominent cause of the mortality.

In the Engineers the high mortality is accounted for by their being generally encamped near mounted troops and from the unsanitary and fatiguing nature of the work they are called upon to perform.

The immunity of the Zouaves and Tirailleurs is the result of acclimatisation and also due to the "privilege of race."

As to the comparative immunity of the hospital attendants, it is stated that the absence of those causes which operate disadvantageously on other arms of the service has much to say to this. This immunity is also pointed out as an argument of "incontestible value" against the opinion that contagion alone is the cause of the development and extension of the epidemic.

XIV.—ON THE HEALTH OF THE TROOPS ON BOARD SHIP.

STATISTICAL REPORT.

Troops on Board Ship.

The troops embarked during the year, as shown in the returns received in the Army Medical Department, were:—

I. Corps, and drafts for corps, proceeding on service abroad	33,003
II. Corps returning from abroad	23,085
III. Corps or detachments, passing by sea from one Command to another	17,510
IV. Invalids returning to England	5,325

I.—Troops proceeding on Foreign Service.

The total number of non-commissioned officers and men embarked for foreign service during the year was 33,003, the equivalent annual strength being 1,638; the increase in these numbers over those of the previous year is due to the occurrence of the war in Egypt, and the consequent departure of troops on active service.

The admissions into hospital amounted to 1,489, and the deaths were 4 in number, giving the respective annual rates of 909·0 and 2·44 per 1,000. Compared with the corresponding rates for the preceding year, the former is higher by 47·0, and the latter lower by 3·11 per 1,000; and in comparison with the average rates for the preceding 10 years, the rate of admission shows an increase of 325·7, and the rate of mortality a decrease of 2·23 per 1,000.

The classes and orders of diseases by which the admissions and deaths were caused are shown in Abstract XLII.

General Diseases.—The *febrile group* caused 67 admissions, or at the rate of 40·9 per 1,000; there were no deaths. The rate of admission is slightly in excess of that of the previous year. Eruptive fevers caused 12 admissions, consisting of one case of small-pox which occurred on board H.M.S. "Serapis" on her voyage to Bombay in January, one case of scarlet fever on board H.M.S. "Crocodile" also *en route* for Bombay in January, and the remainder cases of measles which occurred during some of the voyages of the Indian troopships. Continued fevers caused 37 admissions, one being for enteric fever; this occurred on board H.M.S. "Jumna" on her voyage to Bombay in November; the case was admitted shortly after leaving Portsmouth. Ague caused 8 admissions, and other febrile disorders 10, including 5 of erysipelas and 5 of mumps.

The *constitutional group* of diseases caused 367 admissions and no deaths; the rate of prevalence, 224·1 per 1,000, is greater than that of the preceding year by 25·9. Rheumatism caused 38 admissions, tubercular diseases 6, and scurvy 2, all the remainder being due either to primary or secondary syphilis, 287 and 34 cases respectively, or 321 in all, being at the rate of 196·0 per 1,000, which is higher than in 1881 by 27·1.

The prevalence of venereal disease is reported on certain of the Indian troopships on some of their voyages, in one case being attributed to insufficient previous inspection, and in others it is pointed out that the disease appears to have been contracted in the majority of instances just before embarkation. Of the tubercular affections, two cases were due to phthisis pulmonalis. Of the admissions for scurvy and purpura, one mild case of the former occurred in H.M.S. "Jumna" on her voyage to India in November, and one of purpura in H.M.S. "Serapis" on her voyage in March.

Local Diseases.—Diseases of the nervous system caused only 6 admissions, of which one was for sunstroke, and one a case of observation for mental disease. Affections of the eye caused 21 admissions, mostly of a trivial character, as also 6 from aural affections. Diseases of the circulatory system caused only 6 admissions, mostly due to palpitation. Respiratory affections show 70 admissions in all: 32 from bronchitis, 34 for pneumonia, and 4 for pleurisy. Three deaths were caused by pneumonia. Digestive disorders caused

an admission rate of 86·7 per 1,000, the great majority of the cases being tonsillitis or dyspepsia; diarrhœa caused 13 admissions, and hepatic affections only six. Gonorrhœa and its sequelæ caused an admission rate of 207·5 per 1,000, other urinary affections show but few attacks of illness, as well as diseases of the generative system and of organs of locomotion. The admission rate for cutaneous disease was rather higher, 138·6 per 1,000; a large proportion of the cases were scabies; the remainder call for no remark. Delirium tremens caused two admissions; both cases recovered. *Troops on Board Ship.*

INJURIES.—General injuries show 3 admissions for burns and scalds, and one fatal case of asphyxia by drowning, which occurred at Ismailia.

Local injuries caused 135 admissions, or at the rate of 82·4 per 1,000, the majority of the cases being simple contusions, wounds, and sprains.

The *sanitary condition* of the troopships and transports has been generally reported as satisfactory. Some over-crowding is stated to have existed on H.M.S. "Tyne" on her voyage to Cyprus in September; this, however, is said to have been unavoidable under the circumstances of the Egyptian Expedition, and no evil result appears to have followed.

II.—TROOPS RETURNING HOME FROM ABROAD.

The number of effective non-commissioned officers and men who embarked for England from foreign stations was 23,085, giving the equivalent annual strength of 1,386. The increase in these numbers as compared with those in the preceding year is due principally to the return of troops to England after the cessation of hostilities in Egypt.

The number of admissions was 1,099, and of deaths 9, giving the annual rates of 792·9 and 6·49 per 1,000 respectively, the former being an increase of 62·7, and the latter a decrease of 10·06 per 1,000 on the corresponding rates for the previous year. As compared, however, with the average similar rates for the preceding 10 years, we find an increase of 220·1 per 1,000 in the rate of prevalence of sickness, and a decrease of 6·70 in the rate of mortality.

The admissions and deaths in the various classes and orders of diseases are shown in Abstract XLII.

GENERAL DISEASES.—The *febrile group* caused 192 admissions and 2 deaths, being in the rates of 138·5 and 1·44 per 1,000, both being considerably less than the corresponding rates for the year 1881. Eruptive fevers caused no admissions. Among continued fevers we find 43 admissions for enteric fever, or 31·0 per 1,000. The great majority of these attacks occurred in men returning from active service in Egypt, where they contracted the disease. One death occurred from enteric fever on board the transport "Calabria" on the voyage from Natal to England. Eighty-eight cases of simple continued fever and febricula, or 63·5 per 1,000, complete the admissions due to continued fevers.

The attacks of paroxysmal fevers numbered 60, or at the rate of 43·3 per 1,000, a very considerable decrease on the corresponding rate in the previous year.

The *constitutional group* of diseases caused 178 admissions and 1 death, being at the respective rates of 128·4 and ·72 per 1,000. Out of the total number of admissions, 146 were due to syphilis, or 105·4 per 1,000. The prevalence of venereal disease is noticed in the reports from certain transports from India, South Africa, and Egypt. The rate of prevalence is, however, considerably less than that which is observed among troops proceeding abroad from England. The remaining admissions in this group were caused by the different varieties of rheumatic affections in 25 instances, by tubercular diseases 6, and by dropsy one case. One death from phthisis pulmonalis occurred on board H.M.S. "Malabar" en route from India.

LOCAL DISEASES.—Five admissions and two deaths are returned under diseases of the nervous system. The deaths were due to apoplexy and meningitis respectively; both cases occurred in men returning from active service in Egypt; in the latter case the man is said to have suffered from sunstroke at Ismailia. Sixty-four admissions for ophthalmic affections were chiefly due to conjunctivitis occurring in men returning from Egypt.

Troops on Board Ship.

Cardiac affections caused only three admissions, but one death from valve disease occurred in a man on board H.M.S. "Crocodile" returning home from India. Respiratory diseases caused an admission rate of 64·9 per 1,000. Twenty-two cases of pneumonia occurred, 6 of pleurisy, and the remainder were due to bronchitis. Diseases of the digestive system caused 211 admissions, or 152·2 per 1,000, the greater part of which were caused by diarrhœa and dysentery, 106 and 58 cases respectively, the troops returning from Egypt suffered principally. One death from diarrhœa is returned among them. Admissions for urinary affections were chiefly due to gonorrhœa, the rate of which, together with that for its sequelæ, amounts to 60·6 per 1,000. The remaining orders of local diseases caused but few admissions, and call for no special remark.

Poisons.—Three cases of delirium tremens are returned, and one of alcoholic poisoning, which proved fatal. This case occurred on board the transport "City of Lincoln" from Egypt. A number of prisoners broke into the spirit room at night, and one man was found in the early morning suffering from alcoholic poisoning, he died 12 hours afterwards.

Injuries.—Two deaths from drowning are returned; both occurred on the voyage home from South Africa; one case happened from the transport "Calabria" and was accidental, the other, from the transport "Warwick Castle," was one of *suicide*. Local injuries caused 49 admissions, principally contusions, wounds, and sprains; the cases do not call for special mention.

The *sanitary condition* of the troopships and transports has been generally reported as satisfactory. The accommodation for hospital on board the transport "Oxenholme" from Egypt is said to have been limited and unsuitable.

III.—Troops proceeding from one Station Abroad to Another.

The number of non-commissioned officers and men who proceeded from one station abroad to another during the year was 17,510, giving the equivalent annual strength of 563. The admissions to hospital numbered 284, and there was one death, being in the annual rates of 504·4 and 1·78 per 1,000, both of which are considerably less than the corresponding rates for the previous year as well as for the average of the preceding 10 years.

The admissions and deaths in the various classes and orders of diseases are shown in Abstract XLII.

General Diseases.—The *febrile group* of diseases caused 56 admissions, equal to an annual rate of 99·5 per 1,000, somewhat in excess of the similar rate for the preceding year. One death occurred. Eruptive fevers were represented by a single case of scarlet fever which occurred on board H.M.S. "Orontes" between Simons Bay and Natal in January. Continued fevers caused 38 admissions, seven of which were due to enteric fever occurring on H.M.S. "Orontes" on her voyage from Natal to Malta in February and March. It would appear that all the cases were contracted prior to embarkation; the first case occurred on 24th February, the day after departure from Durban, and the last on 12th March, 18 days after embarkation; the disease had been prevalent in Pinetown and Pietermaritzburg, where the men had been stationed before leaving the Command. All the cases of enteric fever were transferred to hospital at Malta on disembarkation. There were 15 admissions for paroxysmal fevers, of which two were cases of remittent fever, one of them, that of a man proceeding to Bombay from Alexandria on board H.M.S. "Euphrates" after active service in Egypt, proved fatal. The remaining admissions were for ague; all did well.

The *constitutional group* of diseases caused only 49 admissions, and of these 41 were due to syphilis. The admission rate for venereal disease generally, including gonorrhœa and its sequelæ, 158·1 per 1,000, is considerably less than the similar rate in 1881.

Local Diseases.—Diseases of the nervous system caused only 4 admissions, three being due to sunstroke, two of them on board the S.S. "Bancoora" from Aden to Suez in August are reported to have been serious, but to have recovered. Digestive affections caused 32 admissions, 15 for diarrhœa, 9 for dysentery, and 4 for hepatic disorders. Gonorrhœa and its sequelæ show 48

admissions, or 85·3 per 1,000. The remaining orders of local diseases caused but little sickness. *Troops on Board Ship.*

The admissions under the head of injuries numbered 33, but none of the cases demand special notice.

The *sanitary condition* of the ships employed in the transport of the troops is reported to have been generally satisfactory. In one transport with troops for Egypt some over-crowding is reported, but it is stated that it was unavoidable on account of military reasons. No evil effects resulted to the health of the men.

IV.—Invalids returning to England.

The number of invalids embarked for England during the year was 5,325, among whom 51 deaths occurred at sea. These are accounted for in the tables showing the sickness and mortality of the Commands from which the men were invalided. The number of invalids is considerably higher than that in the preceding year, 3,890, but it must be remembered the invalids from active service in Egypt are included, many of whom in times of peace would have recovered under treatment in the Command, and invaliding would have been unnecessary in their cases.

ABSTRACT No. 1.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into serving in the UNITED KINGDOM during the Year 1882, with the Ratios

Orders.	Average Strength in Annual Returns, 86,847. †Average Strength, including Men detached, 90,075. Diseases.	Admissions into Hospital.	Died. With the Regiment.	Died. Absent from the Regiment.	Died. Total.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*						
	Febrile Group.						
	Eruptive Fevers { Small-pox	14	1	—	1	—	1·08
	Eruptive Fevers { Other	533	8	—	8	—	28·46
	Continued „ { Enteric	178	39	3	42	—	22·31
	Continued „ { Other	1,049	4	—	4	—	36·94
	Yellow Fever	—	—	—	—	—	—
	Paroxysmal Fevers	970	2	1	3	2	32·50
	Cholera	—	—	—	—	—	—
	Other diseases	588	8	—	8	—	26·28
	Total	3,332	62	4	66	2	147·57
	Constitutional Group.						
	Rheumatism	3,425	4	—	4	119	211·97
	Primary Syphilis	8,857	—	—	—	—	680·57
	Secondary „	2,413	2	—	2	55	181·69
	Tubercular Diseases	836	169	11	180	367	126·76
	Scurvy and Purpura	7	—	—	—	—	·84
	Other diseases	100	5	—	5	12	6·08
	Total	15,638	180	11	191	553	1207·91
	II.—*Local Diseases.*						
	Diseases of the—						
1	Nervous System	1,006	36	—	36	240	107·52
2	Eye	1,317	—	—	—	87	71·89
3	Ear	493	—	—	—	64	32·65
4	Nose	43	—	—	—	1	1·21
5	Circulatory System	1,289	61	4	65	438	128·65
6	Absorbent „	981	—	1	1	2	81·74
7	Ductless Glands	8	—	—	—	4	·21
8	Respiratory System	5,691	100	7	107	96	304·44
9	Digestive „	9,768	47	5	52	223	354·37
10	Urinary System { Gonorrhœa	9,189	—	—	—	—	545·22
10	Urinary System { Sequelæ of Gonorr.	903	—	—	—	9	56·84
10	Urinary System { Other diseases	1,114	11	1	12	41	50·87
11	Generative System	923	—	—	—	16	44·15
12	Organs of Locomotion	593	4	—	4	118	54·85
13	Cellular Tissue	1,860	1	—	1	10	82·53
14	Cutaneous System	9,211	—	—	—	37	352·46
	III.—*Debility*	961	1	—	1	183	69·21
	IV.—*Poisons*	205	13	—	13	—	6·50
	V.—*Injuries.*						
1	General	14	38	6	44	2	·79
2	Local	9,168	28	2	30	82	382·24
3	In action	3	—	—	—	4	·40
	No appreciable disease	283	—	—	—	—	7·82
	Cause unknown (refers to deaths only).	—	—	2	2	—	—
	General total	74,008	582	43	625	2,212	4092·04

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879
† Ratios of deaths and invalids calculated on this strength.

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS per 1,000 of the Strength and the Average Ratios for 10 Years.*

Ratio per 1,000.				Ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
·2	·01	—	·01	} 5·7	·07	—	·28
5·1	·09	—	·33				
2·0	·47	—	·26	} 16·4	·27	—	·58
12·1	·04	—	·48				
—	—	—	—	—	—	—	—
11·2	·03	·02	·37	16·1	·01	—	·53
—	—	—	—	—	—	—	—
6·8	·09	—	·30	9·4	·06	—	·32
38·4	·78	·02	1·70	47·6	·41	·04	1·71
39·4	·04	1·32	2·44	41·3	·07	1·40	2·39
102·0	—	—	7·84	87·2	—	—	6·56
27·8	·02	·61	2·09	30·1	·03	·61	2·32
9·6	2·00	4·07	1·46	10·8	2·33	4·17	1·38
·1	—	—	·01	·3	—	—	·02
1·2	·06	·13	·07	1·6	·11	·15	·16
180·1	2·12	6·14	13·91	171·3	2·54	6·34	12·83
11·6	·40	2·67	1·24	12·7	·50	2·65	1·16
15·2	—	·97	·82	14·3	—	·74	·78
5·7	—	·71	·38	5·8	—	·62	·37
·5	—	·01	·01	·5	—	·02	·02
14·8	·72	4·86	1·48	14·9	·77	4·39	1·29
11·3	·01	·02	·94	13·0	—	·04	1·06
—	—	·04	—	·1	—	·01	·01
65·5	1·19	1·07	3·51	81·4	1·47	1·37	3·99
112·5	·58	2·47	4·08	109·0	·48	1·96	3·72
105·8	—	—	6·28	95·2	—	—	5·19
10·4	—	·10	·65	11·7	—	·08	·75
12·8	·13	·46	·59	11·8	·19	·44	·59
10·6	—	·18	·51	11·3	—	·20	·59
6·8	·04	1·31	·63	6·4	·05	1·20	·53
21·4	·01	·11	95	23·5	·02	·07	1·08
106·1	—	·41	4·06	116·5	—	·34	4·39
11·3	·01	2·02	·80	10·7	·01	2·21	·78
2·4	·15	—	·07	2·0	·12	—	·05
·2	·49	·02	·01	·1	·40	·01	·02
105·5	·33	·91	4·40	106·8	·29	·85	4·24
—	—	·04	—	—	—	·02	·01
3·3	—	—	·09	3·3	—	—	·10
—	·02	—	—	—	·03	—	—
852·2	6·94	24·55	47·12	869·9	7·28	23·62	45·22

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT A.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, the NORTHERN DISTRICT during the Year 1882, with the Ratios

Orders.	Average Strength, 8,163. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive Fevers { Small-pox	—	—	—	—
	Eruptive Fevers { Other	21	—	—	1·30
	Continued „ { Enteric	14	5	—	1·27
	Continued „ { Other	102	—	—	2·63
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	141	—	—	7·32
	Cholera	—	—	—	—
	Other diseases	40	—	—	1·73
	Total	318	5	—	14·25
	Constitutional Group.				
	Rheumatism	329	1	12	18·52
	Primary Syphilis	1,158	—	—	92·80
	Secondary „	265	1	11	19·80
	Tubercular Diseases	109	28	44	16·41
	Scurvy and Purpura	1	—	—	·03
	Other diseases	16	1	4	·94
	Total	1,878	31	71	148·50
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	91	3	21	8·22
2	Eye	105	—	11	4·57
3	Ear	19	—	2	·76
4	Nose	4	—	—	·26
5	Circulatory System	131	7	52	5·85
6	Absorbent „	103	—	—	8·53
7	Ductless Glands	—	—	—	—
8	Respiratory System	509	8	14	29·28
9	Digestive „	788	2	34	30·94
10	Urinary System { Gonorrhœa	1,110	—	—	66·43
10	Urinary System { Sequelæ of Gonorrhœa	110	—	—	7·26
10	Urinary System { Other diseases	95	2	4	3·30
11	Generative System	90	—	4	3·39
12	Organs of Locomotion	51	—	11	2·46
13	Cellular Tissue	207	—	1	9·08
14	Cutaneous System	994	—	7	35·42
	III.—*Debility*	95	—	23	6·00
	IV.—*Poisons*	23	1	—	·57
	V.—*Injuries.*				
1	General	3	5	1	·24
2	Local	921	3	9	35·27
3	In action	—	—	—	—
	No appreciable disease	16	—	—	·71
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	7,661	67	265	421·29

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000, from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	·61	—	—	2·8	—	—	·10
2·6	—	—	·16				
1·7	—	—	·16	13·3	·12	—	·37
12·5	—	—	·32				
—	—	—	—	—	—	—	—
17·3	—	—	·90	14·2	—	—	·39
—	—	—	—	—	—	—	—
4·9	—	—	·21	6·9	·04	—	·21
39·0	·61	—	1·75	37·2	·16	—	1·07
40·3	·12	1·47	2·27	41·6	·08	1·58	2·42
141·9	—	—	11·37	109·2	—	—	8·45
32·5	·12	1·35	2·43	36·6	·04	·71	2·61
13·3	3·43	5·39	2·01	12·4	3·05	3·60	1·65
·1	—	—	—	·1	—	—	·01
2·0	·12	·49	·11	1·2	·04	·47	·23
230·1	3·79	8·70	18·19	201·1	3·21	6·37	15·37
11·1	·37	2·57	1·01	13·8	·51	2·93	1·25
12·9	—	1·35	·56	11·9	—	·71	·55
2·3	—	·25	·09	3·7	—	·55	·21
·5	—	—	·03	·4	—	—	·01
16·0	·86	6·37	·72	11·4	·95	4·12	1·02
12·6	—	—	1·05	13·3	—	·12	1·10
—	—	—	—	—	—	—	—
62·4	·98	1·71	3·59	83·3	2·30	1·54	3·78
96·5	·25	4·16	3·79	100·4	·47	2·42	3·05
136·0	—	—	8·14	117·2	—	—	5·81
13·5	—	—	·89	17·6	—	—	1·06
11·6	·25	·49	·40	10·3	·28	·40	·43
11·0	—	·49	·41	11·6	—	·28	·61
6·2	—	1·35	·30	6·3	·08	1·23	·55
25·4	—	·12	1·11	25·2	·04	·16	1·06
121·8	—	·86	4·34	142·3	—	·63	4·39
11·6	—	2·82	·73	9·9	·04	1·86	·57
2·8	·12	—	·07	1·8	·16	—	·04
·4	·61	·12	·03	·2	·44	—	·01
112·8	·37	1·10	4·32	116·5	·44	1·31	4·25
—	—	—	—	—	—	—	—
2·0	—	—	·09	1·9	—	—	·06
—	—	—	—	—	·04	—	—
938·5	8·21	32·46	51·61	936·8	9·11	24·63	46·25

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT B.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, the EASTERN DISTRICT during the Year 1882, with the Ratios

Orders.	Average Strength, 4,318. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive Fevers { Small-pox	—	—	—	—
	Eruptive Fevers { Other	25	—	—	·96
	Continued „ { Enteric	5	1	—	·42
	Continued „ { Other	40	—	—	1·01
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	67	—	—	1·75
	Cholera	—	—	—	—
	Other diseases	25	—	—	1·14
	Total	162	1	—	5·28
	Constitutional Group.				
	Rheumatism	178	—	8	10·96
	Primary Syphilis	424	—	—	29·05
	Secondary „	130	—	1	9·17
	Tubercular Diseases	40	11	18	4·83
	Scurvy and Purpura	—	—	—	—
	Other diseases	9	1	2	·89
	Total	781	12	29	54·90
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	59	1	16	5·97
2	Eye	113	—	8	4·62
3	Ear	29	—	3	1·96
4	Nose	—	—	—	—
5	Circulatory System	77	—	22	5·90
6	Absorbent „	54	—	—	3·86
7	Ductless Glands	—	—	—	—
8	Respiratory System	259	8	5	11·55
9	Digestive „	487	2	13	15·65
10	Urinary System { Gonorrhœa	455	—	—	20·02
	Urinary System { Sequelæ of Gonorrhœa	58	—	—	3·50
	Urinary System { Other diseases	52	—	2	1·75
11	Generative System	59	—	—	2·67
12	Organs of Locomotion	81	—	6	2·22
13	Cellular Tissue	110	—	1	3·49
14	Cutaneous System	487	—	2	17·29
	III.—*Debility*	88	—	23	4·45
	IV.—*Poisons*	9	—	—	·31
	V.—*Injuries.*				
1	General	—	1	—	—
2	Local	430	2	5	16·21
3	In action	—	—	—	—
	No appreciable disease	6	—	—	·13
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	3,806	27	135	131·73

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	—	—	—	6·5	—	—	·23
5·8	—	—	·22				
1·2	·23	—	·10	16·0	·08	—	·38
9·2	—	—	·23				
—	—	—	—	—	—	—	—
15·5	—	—	·41	27·2	—	·08	·80
—	—	—	—	—	—	—	—
5·8	—	—	·26	6·8	·08	—	·39
37·5	·23	—	1·22	56·5	·16	·08	1·80
41·2	—	1·85	2·54	47·8	—	2·10	2·75
98·2	—	—	6·73	75·1	—	—	5·12
30·1	—	·23	2·12	22·6	—	·41	1·94
9·3	2·55	4·17	1·12	18·1	2·26	5·34	1·33
—	—	—	—	·2	—	·08	·02
2·1	·23	·46	·21	1·3	·16	·24	·38
180·9	2·78	6·71	12·72	160·1	2·42	8·17	11·54
13·7	·23	3·71	1·38	12·2	·78	2·99	1·07
26·1	—	1·85	1·07	15·1	—	·73	·78
6·7	—	·69	·45	4·0	—	·56	·25
—	—	—	—	·6	—	—	·01
17·8	—	5·10	1·37	14·7	1·05	3·96	1·16
12·5	—	—	·89	15·8	—	·08	1·05
—	—	—	—	—	—	—	—
60·0	1·85	1·16	2·67	101·5	2·02	·81	4·71
112·8	·46	3·01	3·62	122·9	·49	2·91	4·03
105·4	—	—	4·64	100·9	—	—	4·68
18·4	—	—	·81	13·2	·08	—	·74
12·0	—	·46	·41	8·2	·24	·16	·82
13·6	—	—	·62	15·8	—	·08	·90
7·2	—	1·39	·51	5·6	—	1·13	·46
25·5	—	·23	·81	24·2	·08	—	1·18
112·8	—	·46	4·00	110·6	—	·41	3·75
20·4	—	5·33	1·03	13·3	—	4·20	·98
2·1	—	—	·07	4·4	—	—	·08
—	·23	—	—	·2	·32	—	—
99·6	·46	1·16	3·76	109·5	·16	·73	4·30
—	—	—	—	—	—	—	—
1·4	—	—	·03	2·3	—	—	·12
—	—	—	—	—	—	—	—
881·4	6·25	31·26	42·08	911·6	7·76	27·00	44·

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT C.—Table showing the Average Strength, Admissions into Hospital, the Western District during the Year 1882, with the Ratios

Orders.	Average Strength, 4,871. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive Fevers - Small-pox	1	—	—	·06
	Eruptive Fevers - Other	13	—	—	·54
	Continued „ - Enteric	7	2	—	·87
	Continued „ - Other	43	—	—	·73
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	37	—	—	1·48
	Cholera	—	—	—	—
	Other diseases	28	—	—	1·46
	Total	129	2	—	5·14
	Constitutional Group.				
	Rheumatism	217	—	18	17·87
	Primary Syphilis	438	—	—	41·70
	Secondary „	103	—	6	9·83
	Tubercular Diseases	60	13	27	11·14
	Scurvy and Purpura	—	—	—	—
	Other diseases	1	—	—	·04
	Total	819	13	51	79·57
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	40	2	9	6·09
2	Eye	57	—	7	4·54
3	Ear	37	—	4	3·52
4	Nose	2	—	—	·10
5	Circulatory System	71	6	17	8·04
6	Absorbent „	61	—	—	5·59
7	Ductless Glands	—	—	—	—
8	Respiratory System	201	2	2	10·73
9	Digestive „	435	2	18	18·26
10	Urinary System - Gonorrhœa	685	—	—	42·11
10	Urinary System - Sequelæ of Gonorrhœa	21	—	2	1·41
10	Urinary System - Other diseases	90	1	—	3·73
11	Generative System	70	—	—	3·40
12	Organs of Locomotion	28	—	6	4·81
13	Cellular Tissue	88	—	—	3·40
14	Cutaneous System	433	—	2	15·43
	III.—*Debility*	28	—	5	2·14
	IV.—*Poisons*	2	1	—	·07
	V.—*Injuries.*				
1	General	2	1	—	·03
	Local	331	—	3	16·12
	In action	—	—	1	·14
	No appreciable disease	7	—	—	·18
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	3,637	30	127	234·55

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in per 1,000 of the Strength and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000, from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
·2	—	—	·01	7·5	—	—	·28
2·7	—	—	·11				
1·4	·41	—	·18	12·8	·48	—	·54
8·9	—	—	·15				
—	—	—	—	—	—	—	—
7·6	—	—	·30	14·1	—	—	·66
—	—	—	—	—	—	—	—
5·7	—	—	·30	5·2	—	—	·16
26·5	·41	—	1·05	39·6	·48	—	1·65
44·6	—	3·70	3·57	37·6	—	1·60	2·57
89·9	—	—	8·56	60·7	—	—	4·93
21·1	—	1·23	1·91	26·9	·07	·35	2·39
12·3	2·67	5·54	2·29	10·8	1·87	4·02	1·51
—	—	—	—	·2	—	—	·01
·2	—	—	·01	1·0	·21	·14	·10
168·1	2·67	10·47	16·34	187·2	2·15	6·11	11·50
8·2	·41	1·85	1·25	14·5	·42	3·19	1·15
11·7	—	1·44	·93	11·5	—	·62	·82
7·6	—	·82	·72	4·2	—	·28	·20
·4	—	—	·02	·5	—	—	·04
14·6	1·23	3·49	1·65	13·1	1·18	2·99	1·18
12·5	—	—	1·15	9·1	—	—	·66
—	—	—	—	—	—	—	—
41·3	·41	·41	2·20	66·1	1·18	1·04	3·63
89·3	·41	3·69	3·75	98·8	·35	2·86	3·57
140·7	—	—	8·64	111·0	—	—	6·32
4·3	—	·41	·29	11·9	—	·14	·70
18·5	·21	—	·77	12·3	·14	·49	·74
14·4	—	—	·70	9·7	—	·21	·62
5·7	—	1·23	·99	6·7	—	·90	·48
18·1	—	—	·70	17·8	—	—	·94
88·9	—	·41	3·17	103·0	—	·14	3·32
5·7	—	1·03	·44	3·2	—	1·87	1 18
·4	—	—	·01	2·4	·14	—	·11
·4	·21	—	·00	·1	·21	—	·05
68·0	·21	·62	3·31	87·2	·28	·90	3·81
—	—	·21	·03	—	—	—	—
1·4	—	—	·04	3·3	—	—	·09
—	—	—	—	—	—		—
746·7	6·16	26·07	48·15	768·7	6·53	21·24	42·71

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT D.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, the SOUTHERN DISTRICT during the Year 1882, with the Ratios

Orders.	Average Strength, 6,760. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive Fevers - Small-pox	—	—	—	—
	Eruptive Fevers - Other	34	1	—	1·95
	Continued „ - Enteric	16	—	—	2·38
	Continued „ - Other	62	1	—	3·74
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	204	—	—	5·84
	Cholera	—	—	—	—
	Other diseases	24	—	—	1·28
	Total	340	2	—	15·14
	Constitutional Group.				
	Rheumatism	282	—	12	19·41
	Primary Syphilis	514	—	—	45·47
	Secondary „	165	—	5	15·26
	Tubercular Diseases	78	21	26	14·46
	Scurvy and Purpura	1	—	—	·05
	Other diseases	3	—	1	·44
	Total	1,038	21	44	95·09
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	103	4	32	12·01
2	Eye	111	—	9	7·45
3	Ear	49	—	4	2·71
4	Nose	6	—	—	·14
5	Circulatory System	147	4	58	20·86
6	Absorbent „	95	—	—	9·04
7	Ductless Glands	—	—	—	—
8	Respiratory System	578	12	15	32·28
9	Digestive „	978	8	30	38·11
10	Urinary System - Gonorrhœa	760	—	—	47·36
10	Urinary System - Sequelæ of Gonorrhœa	75	—	2	5·04
10	Urinary System - Other diseases	97	1	6	7·78
11	Generative System	47	—	3	3·24
12	Organs of Locomotion	61	—	9	7·80
13	Cellular Tissue	125	—	1	8·13
14	Cutaneous System	644	—	1	38·37
	III.—*Debility*	86	—	16	8·50
	IV.—*Poisons*	21	4	—	·65
	V.—*Injuries.*				
1	General	1	8	1	·36
2	Local	842	8	6	42·87
3	In action	—	—	—	—
	No appreciable disease	28	—	—	·90
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	6,482	67	237	403·33

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in per 1,000 of the Strength and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	—	—	—	6·0	—	—	·32
5·0	·15	—	·29				
2·4	—	—	·35	13·3	·09	—	·44
9·1	·15	—	·55				
—	—	—	—	—	—	—	—
30·2	—	—	·86	32·1	—	·09	1·20
—	—	—	—	·1	—	—	—
3·6	—	—	·19	6·7	·14	—	·26
59·3	·30	—	2·24	58·2	·23	·09	2·22
41·7	—	1·78	2·87	49·1	·14	1·79	3·01
76·0	—	—	6·73	53·1	—	—	4·48
24·4	—	·74	2·26	22·5	—	·55	1·96
10·8	3·11	3·84	2·14	11·0	2·76	4·23	1·80
·2	—	—	·01	·4	—	—	·04
·4	—	·15	·06	2·2	·09	·18	·28
158·5	3·11	6·51	14·07	138·3	2·99	6·75	11·57
15·2	·59	4·78	1·78	14·3	·46	3·26	1·64
16·4	—	1·33	1·10	13·9	—	·74	·81
7·2	—	·59	·40	6·6	—	·74	·60
·9	—	—	·02	·6	—	·05	·02
21·7	·59	3·58	3·01	17·0	·69	5·15	1·83
14·1	—	—	1·34	11·7	—	—	1·08
—	—	—	—	—	—	·05	·01
85·5	1·78	2·22	4·78	99·0	1·19	1·93	5·42
144·7	1·18	4·43	5·64	140·8	1·01	2·71	5·18
112·4	—	—	7·01	97·0	—	—	5·82
11·1	—	·30	·74	9·9	—	·09	·88
14·4	·15	·89	1·15	14·5	·32	·27	·65
7·0	—	·44	·48	11·5	—	·23	·62
9·0	—	1·33	1·15	6·6	—	·96	·70
18·5	—	·15	1·20	19·6	·05	·05	1·00
124·9	—	·15	5·67	127·6	—	·37	5·07
12·7	—	2·37	1·26	13·2	—	3·03	1·11
3·1	·59	—	·10	2·0	·05	—	·05
·2	1·18	·15	·05	·2	·32	·05	·08
124·6	·44	·89	6·34	120·1	·18	1·43	5·19
—	—	—	—	·1	—	·27	·05
4·1	—	—	·18	5·8	—	—	·20
—	—	—	—	—	—	—	—
951·5	9·91	35·06	59·66	928·0	7·49	28·23	51·70

to 1882 will be given in the Report for 1883 those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT E.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, the CHATHAM DISTRICT during the Year 1882, with the Ratios

Orders.	Average Strength, 4,103. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive Fevers { Small-pox	1	—	—	·16
	Eruptive Fevers { Other	27	1	—	2·42
	Continued „ { Enteric	4	1	—	·18
	Continued „ { Other	35	1	—	2·68
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	68	—	—	1·55
	Cholera	—	—	—	—
	Other diseases	23	1	—	1·38
	Total	158	4	—	8·32
	Constitutional Group.				
	Rheumatism	226	1	20	14·20
	Primary Syphilis	290	—	—	23·42
	Secondary „	60	—	1	4·90
	Tubercular Diseases	45	8	17	5·54
	Scurvy and Purpura	1	—	—	·03
	Other diseases	1	—	—	·02
	Total	628	9	38	48·11
	II. *Local Diseases.*				
	Diseases of the—				
1	Nervous System	64	1	18	6·94
2	Eye	89	—	15	5·73
3	Ear	39	—	7	2·90
4	Nose	4	—	1	·09
5	Circulatory System	132	1	50	13·94
6	Absorbent „	51	—	—	2·88
7	Ductless Glands	—	—	—	—
8	Respiratory System	288	3	8	16·90
9	Digestive „	491	2	13	14·95
10	Urinary System { Gonorrhœa	416	—	—	23·61
10	Urinary System { Sequelæ of Gonorrhœa	39	—	—	2·08
10	Urinary System { Other diseases	54	—	2	2·99
11	Generative System	47	—	2	1·59
12	Organs of Locomotion	33	1	16	3·91
13	Cellular Tissue	103	—	2	3·87
14	Cutaneous System	451	—	2	14·44
	III.—*Debility*	66	—	18	3·70
	IV.—*Poisons*	12	1	—	·31
	V.—*Injuries.*				
1	General	1	1	—	—
2	Local	557	2	7	21·25
3	In action	—	—	—	—
	No appreciable disease	32	—	—	·25
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	3,750	25	199	198·76

* The average ratios for 10 years will be given in future years. The ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
·2	—	—	·04	2·5	·08	—	·12
6·6	·24	—	·59				
1·0	·24	—	·03	7·2	·17	—	·24
8·5	·24	—	·65				
—	—	—	—	—	—	—	—
16·6	—	—	·38	7·6	—	—	·28
—	—	—	—	—	—	—	—
5·6	·24	—	·34	3·2	—	—	·11
38·5	·97	—	2·03	20·5	·25	—	·75
55·1	·24	4·88	3·46	52·8	—	1·93	3·04
70·7	—	—	5·71	58·4	—	—	4·66
14·6	—	·24	1·19	19·6	—	1·25	1·73
11·0	1·95	4·14	1·35	13·1	1·93	6·69	1·32
·2	—	—	·01	·2	—	—	·00
·2	—	—	·01	·5	—	·17	·02
151·8	2·19	9·26	11·73	144·6	1·93	10·04	10·77
15·6	·24	4·39	1·69	10·9	·25	3·26	1·06
21·7	—	3·65	1·40	14·9	—	1·09	1·03
9·5	—	1·70	·71	10·9	—	1·93	·82
1·0	—	·24	·02	·3	—	—	·02
32·2	·24	12·19	3·40	18·5	·75	6·19	1·62
12·4	—	—	·70	9·2	—	—	·68
—	—	—	—	—	—	—	—
70·2	·73	1·95	4·12	92·2	·75	1·00	4·49
119·7	·49	3·17	3·64	107·4	·25	1·51	4·03
101·4	—	—	5·75	91·3	—	—	5·23
9·5	—	—	·50	11·9	—	—	·69
13·2	—	·49	·73	15·5	·08	·50	·74
11·5	—	·49	·39	8·8	—	·17	·41
8·0	·24	3·90	·95	8·6	—	3·01	·74
25·1	—	·49	·94	21·5	—	—	·98
109·9	—	·49	3·52	109·8	—	·25	3·73
16·1	—	4·39	·90	21·0	—	5·44	1·48
2·9	·24	—	·08	2·5	·08	—	·08
·2	·24	—	—	—	·17	—	—
135·8	·49	1·70	5·18	103·1	·17	1·00	4·35
—	—	—	—	—	—	—	—
7·8	—	—	·06	3·2	—	—	·10
—	—	—	—	—	—	—	—
914·0	6·09	48·50	48·44	826·6	4·68	35·39	43·79

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT F.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, the SOUTH-EASTERN DISTRICT during the Year 1882, with the Ratios*

Orders.	Average Strength, 5,995. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive Fevers { Small-pox	—	—	—	—
	Eruptive Fevers { Other	32	—	—	1·36
	Continued „ { Enteric	9	4	—	0·91
	Continued „ { Other	63	1	—	2·74
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	136	1	1	3·44
	Cholera	—	—	—	—
	Other diseases	84	—	—	3·52
	Total	324	6	1	11·97
	Constitutional Group.				
	Rheumatism	275	—	8	18·15
	Primary Syphilis	254	—	—	21·67
	Secondary „	148	—	8	13·90
	Tubercular Diseases	40	6	15	5·64
	Scurvy and Purpura	—	—	—	—
	Other diseases	10	—	—	·65
	Total	727	6	31	60·01
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	86	—	20	7·74
2	Eye	124	—	6	5·58
3	Ear	45	—	6	3·24
4	Nose	4	—	—	·04
5	Circulatory System	63	3	19	6·12
6	Absorbent „	45	—	1	3·53
7	Ductless Glands	—	—	—	—
8	Respiratory System	487	6	9	27·14
9	Digestive „	891	6	17	31·33
10	Urinary System { Gonorrhœa	491	—	—	38·11
10	Urinary System { Sequelæ of Gonorrhœa	46	—	3	4·58
10	Urinary System { Other diseases	70	1	2	3·25
11	Generative System	60	—	—	2·96
12	Organs of Locomotion	51	1	6	4·25
13	Cellular Tissue	116	—	1	5·26
14	Cutaneous System	737	—	2	27·97
	III.—*Debility*	84	—	7	4·96
	IV.—*Poisons*	23	—	—	·64
	V.—*Injuries.*				
1	General	3	3	—	·10
2	Local	817	4	6	40·43
3	In action	—	—	—	—
	No appreciable disease	58	—	—	·97
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	5,847	36	137	285·18

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	—	—	—	7·1	—	—	·25
5·8	—	—	·23				
1·5	·67	—	·15	10·8	·05	—	·25
10·5	·16	—	·46				
—	—	—	—	—	—	—	—
22·7	·17	·17	·57	44·4	—	·16	1·36
—	—	—	—	—	—	—	—
14·0	—	—	·59	5·7	·05	—	·21
54·0	1·00	·17	2·00	68·0	·10	·16	2·07
45·9	—	1·33	3·03	42·4	·05	1·93	2·36
42·3	—	—	3·61	59·3	—	—	4·76
24·7	—	1·33	2·32	22·7	—	·58	1·78
6·7	1·00	2·50	·94	12.7	1·62	5·28	1·95
—	—	—	—	·2	·05	—	·27
1·7	—	—	·11	3·7	·05	·21	
121·3	1·00	5·17	10·01	141·0	1·78	8·00	11·12
14·3	—	3·34	1·29	16·2	·42	2·56	1·40
20·7	—	1·00	·93	18·0	—	·99	1·11
7·5	—	1·00	·54	6·7	—	·58	·45
·7	—	—	·01	·3	—	—	·01
10·5	·50	3·17	1·02	15·0	·58	4·55	1·48
7·5	—	·17	·59	7·9	—	—	·61
—	—	—	—	·2	—	·05	·01
81·2	1·00	1·50	4·53	96·9	1·67	1·86	4·43
148·6	1·00	2·83	5·23	122·2	·21	2·77	4·45
81·9	—	—	5·52	72·9	—	—	4·04
7·7	—	·50	·77	9·7	—	·21	·72
11·7	·17	·33	·54	9·9	·05	·73	·67
10·0	—	—	·50	11·0	—	·37	·55
8·5	·17	1·00	·71	6·2	·05	·84	·48
19·4	—	·17	·88	23·2	—	·05	·81
122·9	—	·33	4·67	122·4	—	·42	4·58
14·0	—	1·17	·83	10·7	—	2·25	·91
3·8	—	—	·11	2·0	·21	—	·05
·5	·50	—	—	·1	·42	—	·01
136·3	·67	1·00	·02	130·2	·31	1·36	5·06
—	—	—	6·70	—	—	—	—
8·9	—	—	—	3·3	—	—	·08
—	—	—	·16	—	—	—	—
891·9	6·01	22·85	47·56	894·0	5·80	27·25	45·10

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884 &c. &c.

ABSTRACT G.—Table showing the Average Strength, Admissions into Hospital, the Home District during the Year 1882, with the Ratios per

Orders.	Average Strength, 6,916. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive Fevers { Small-pox	—	—	—	—
	Eruptive Fevers { Other	22	1	—	2·02
	Continued „ { Enteric	56	7	—	8·81
	Continued „ { Other	114	—	—	2·90
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	40	—	—	1·30
	Cholera	—	—	—	—
	Other diseases	29	—	—	1·69
	Total	261	8	—	16·72
	Constitutional Group.				
	Rheumatism	265	1	2	16·64
	Primary Syphilis	1,019	—	—	66·81
	Secondary „	275	—	6	18·97
	Tubercular Diseases	68	13	36	8·10
	Scurvy and Purpura	—	—	—	—
	Other diseases	7	1	2	·15
	Total	1,634	15	46	110·67
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	48	4	10	3·00
2	Eye	60	—	2	3·38
3	Ear	16	—	2	·94
4	Nose	3	—	—	·04
5	Circulatory System	89	7	41	7·97
6	Absorbent „	72	—	—	6·05
7	Ductless Glands	—	—	—	—
8	Respiratory System	361	6	7	20·03
9	Digestive „	835	3	11	37·05
10	Urinary System { Gonorrhœa	568	—	—	32·27
10	Urinary System { Sequelæ of Gonorrhœa	71	—	2	4·71
10	Urinary System { Other diseases	49	—	3	1·98
11	Generative System	48	—	—	2·68
12	Organs of Locomotion	52	—	8	3·92
13	Cellular Tissue	191	—	—	8·37
14	Cutaneous System	596	—	2	21·44
	III.—*Debility*	120	—	11	6·48
	IV.—*Poisons*	22	1	—	·88
	V.—*Injuries.*				
1	General	2	2	—	·02
2	Local	547	1	4	23·47
3	In action	—	—	—	—
	No appreciable disease	11	—	—	·17
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	5,656	47	149	312·24

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	—	—	—	6·0	·09	—	·37
3·2	·14	—	·29				
8·1	1·01	—	1·27	21·8	·23	—	·74
16·4	—	—	·42				
—	—	—	—	—	—	—	—
5·8	—	—	·19	5·8	—	·14	·15
—	—	—	—	—	—	—	—
4·2	—	—	·24	9·5	·23	—	·31
37·7	1·16	—	2·41	43·1	·55	·14	1·57
38·3	·14	·29	2·41	41·3	·23	1·66	2·40
147·4	—	—	9·66	153·9	—	—	11·76
39·8	—	·87	2·74	41·3	—	1·66	3·17
9·8	1·88	5·20	1·17	11·0	2·78	6·93	1·55
—	—	—	—	·3	—	—	·04
1·0	·14	·29	·02	1·7	·09	·09	·13
236·3	2·17	6·65	16·00	249·5	3·05	10·34	19·05
6·9	·58	1·44	·43	11·6	·69	3·69	1·03
8·7	—	·29	·49	9·7	—	·51	·50
2·3	—	·29	·14	3·2	—	·55	·18
·4	—	—	·01	·4	—	—	·02
12·9	1·01	5·93	1·15	10·9	·65	4·90	1·00
10·4	—	—	·87	13·2	—	·05	1·33
—	—	—	—	—	—	—	·01
52·2	·87	1·01	2·90	94·3	1·29	2·59	4·43
120·7	·43	1·59	5·36	109·8	·23	1·62	3·09
82·1	—	—	4·67	101·1	—	—	5·82
10·3	—	·29	·68	13·5	—	·23	·79
7·1	—	·43	·29	12·9	·32	·88	·53
6·9	—	—	·39	8·6	—	·28	·44
7·5	—	1·16	·57	6·4	—	1·29	·48
27·6	—	—	1·21	35·8	·05	·23	1·45
86·2	—	·29	3·10	94·8	—	·37	2·87
17·4	—	1·59	·94	10·8	·05	2·08	·64
3·2	·14	—	·13	3·1	·23	—	·07
·3	·29	—	—	·1	·19	—	—
79·1	·14	·58	3·39	92·1	·14	·74	3·37
—	—	—	—	—	—	—	—
1·6	—	—	·02	2·0	—	—	·06
—	—	—	—	—	—	—	—
817·8	6·79	21·54	45·15	926·9	7·44	30·49	48·78

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT H.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, the WOOLWICH DISTRICT during the Year 1882, with the Ratios

Orders.	Average Strength, 4,550. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive Fevers { Small-pox	3	—	—	·23
	Eruptive Fevers { Other	17	—	—	·91
	Continued „ { Enteric	1	—	—	·08
	Continued „ { Other	17	—	—	·83
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	44	—	—	2·20
	Cholera	—	—	—	—
	Other diseases	16	—		1·56
	Total	98	—	—	5·76
	Constitutional Group.				
	Rheumatism	118	—	6	9·42
	Primary Syphilis	292	—	—	30·29
	Secondary „	98	—	3	12·79
	Tubercular Diseases	32	9	19	6·29
	Scurvy and Purpura	—	—	—	—
	Other diseases	4	1	—	·49
	Total	544	10	28	59·28
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	24	1	2	1·96
2	Eye	51	—	1	3·96
3	Ear	14	—	2	1·16
4	Nose	—	—	—	—
5	Circulatory System	44	1	14	5·37
6	Absorbent „	49	—	1	7·32
7	Ductless Glands	—	—	—	—
8	Respiratory System	193	4	5	18·41
9	Digestive „	341	3	8	15·17
10	Urinary System { Gonorrhœa	274	—	—	14·99
	Urinary System { Sequelæ of Gonorrhœa	56	—	—	3·02
	Urinary System { Other diseases	36	2	2	1·96
11	Generative System	29	—	—	1·90
12	Organs of Locomotion	25	—	2	2·56
13	Cellular Tissue	76	—	—	4·87
14	Cutaneous System	307	—	2	14·00
	III.—*Debility*	25	—	6	2.59
	IV.—*Poisons*	25	—	—	·57
	V.—*Injuries.*				
1	General	—	—	—	—
2	Local	337	2	1	17·49
3	In action	1	—	1	·24
	No appreciable disease	10	—	—	·27
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	2,559	28	75	177·85

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
·7	—	—	·05	6·6	·13	—	·40
3·7	—	—	·20				
·2	—	—	·01	8·6	13	—	·29
3·7	—	—	·18				
—	—	—	—	—	—	—	—
9·7	—	—	·48	23·8	—	—	·82
—	—	—	—	—	—	—	—
8·5	—	—	·34	52·8	·20	—	1·31
21·5	—	—	1·26	91·8	·47	—	2·82
25·9	—	1·32	2·07	33·9	—	1·07	2·21
64·2	—	—	6·66	59·9	—	—	4·97
21·5	—	·66	2·81	76·1	·07	·94	7·25
7.0	1·98	4·17	1·38	9·9	2·28	4·82	1·53
—	—	—	—	·3	—	—	·02
·9	·22	—	·11	3·1	·07	·47	·22
119·5	2·20	6·15	13·03	183·2	2·42	7·30	16·20
5·8	·22	·44	·43	8·0	·47	2·08	·77
11·2	—	·22	·87	10·1	—	·80	·57
3·1	—	·44	·26	4·6	—	·94	·35
—	—	—	—	·3	—	—	·01
9·7	·22	3·07	1·18	10·9	·67	4·56	1·05
10·8	—	·22	1·61	11·5	—	—	1·19
—	—	—	—	·1	—	—	—
42·4	·88	1·10	2·95	47·3	1·61	2·55	2·86
74·9	·66	1·76	3·33	103·3	·33	2·08	3·22
60·2	—	—	3·29	65·8	—	—	3·76
12·3	—	—	·66	18·4	—	·13	·95
7·9	·44	·44	·43	10·7	·33	·54	·53
6·4	—	—	·42	8·0	—	·20	·45
5·5	—	·44	·56	5·6	—	1·41	·59
16·7	—	—	1·07	19·5	—	·13	·91
67·5	—	·44	3·08	88·7	—	·13	3·77
5·5	—	1·32	·57	8·1	—	2·21	·68
5·5	—	—	·18	·7	·27	—	·01
—	—	—	—	·1	·33	—	—
74·1	·44	·22	3·85	82·2	.27	·54	3·51
·2	—	·22	·05	—	—	—	—
2·2	—	—	·06	11·5	—	—	·10
—	—	—	—	—	—	—	—
562·4	5·06	16·48	39·09	790·4	7·17	25·60	44·30

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT I.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, the ALDERSHOT DISTRICT during the Year 1882, with the Ratios

Orders.	Average Strength, 10,642. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive Fevers { Small-pox	5	—	—	·48
	Eruptive Fevers { Other	134	—	—	7·11
	Continued „ { Enteric	25	10	—	4·04
	Continued „ { Other	117	—	—	4·39
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	62	1	—	2·55
	Cholera	—	—	—	—
	Other diseases	60	—	—	3·81
	Total	408	11	—	22·38
	Constitutional Group.				
	Rheumatism	488	1	11	31·02
	Primary Syphilis	1,228	—	—	95·72
	Secondary „	232	—	1	17·27
	Tubercular Diseases	93	19	33	14·58
	Scurvy and Purpura	3	—	—	·25
	Other diseases	17	—	—	·85
	Total	2,061	20	45	159·69
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	145	8	29	18·90
2	Eye	179	—	8	12·08
3	Ear	55	—	10	4·53
4	Nose	—	—	—	—
5	Circulatory System	210	8	72	30·08
6	Absorbent „	132	—	—	10·02
7	Ductless Glands	—	—	—	—
8	Respiratory System	569	5	7	39·22
9	Digestive „	1,270	6	19	54·61
10	Urinary System { Gonorrhœa	1,319	—	—	93·17
10	Urinary System { Sequelæ of Gonorrhœa	90	—	—	5·64
10	Urinary System { Other diseases	125	2	7	5·50
11	Generative System	146	—	1	8·05
12	Organs of Locomotion	75	1	11	8·04
13	Cellular Tissue	133	—	—	9·67
14	Cutaneous System	1,121	—	6	54·25
	III.—*Debility*	121	—	26	11·31
	IV.—*Poisons*	23	1	—	·94
	V.—*Injuries.*				
1	General	—	1	—	—
2	Local	915	2	11	45·65
3	In action	—	—	—	—
	No appreciable disease	20	—	—	1·20
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	9,162	65	252	594·93

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
·5	—	—	·04	8·1	·09	—	·42
12·6	—	—	·67				
2·3	·94	—	·38	17·3	·18	—	·75
11·0	—	—	·41				
—	—	—	—	—	—	—	—
5·8	·09	—	·24	5·9	—	·03	·27
—	—	—	—	—	—	—	—
5·6	—	—	·36	6·4	·03	—	·39
37·8	1·03	—	2·10	37·7	·30	·03	1·83
45·9	·09	1·03	2·92	47·5	·03	1·61	3·12
115·4	—	—	9·00	76·8	—	—	4·96
21·8	—	·09	1·62	17·8	—	·52	1·20
8·7	1·79	3·10	1·37	8·7	1·49	3·72	·92
·3	—	—	·02	·2	—	—	·01
1·6	—	—	·08	1·0	·24	·03	·09
193·7	1·88	4·23	15·01	152·0	1·77	5·88	10·30
13·6	·75	2·73	1·78	13·8	·49	2·65	1·02
16·8	—	·75	1·13	17·7	—	·98	·90
5·2	—	·94	·42	9·7	—	1·04	·66
—	—	—	—	·9	—	·06	·04
19·7	·75	6·77	2·83	21·5	·70	7·83	1·76
12·4	—	—	·94	15·6	—	·03	1·28
—	—	—	—	·2	—	—	·01
53·5	·47	·66	3·68	78·1	1·16	1·49	4·44
119·3	·56	1·79	5·13	109·6	·40	2·93	5·18
123·9	—	—	8·76	96·0	—	—	5·47
8·5	—	—	·53	5·9	—	·06	·45
11·7	·19	·66	·52	9·4	·06	·52	·53
13·7	—	·09	·76	13·8	·03	·21	·75
7·1	·09	1·03	·76	6·5	·03	1·61	·44
17·2	—	—	·91	22·3	—	·03	1·11
105·3	—	·56	5·10	112·4	—	·52	5·67
11·4	—	2·44	1·06	11·6	—	3·08	·78
2·2	·09	—	·09	·9	·03	—	·04
—	·09	—	—	·1	·27	·08	·10
86·0	·19	1·03	4·29	85·0	·27	·76	4·27
—	—	—	—	—	—	—	—
1·9	—	—	·11	1·6	—	—	·10
—	—	—	—	—	—	—	—
860·9	6·10	23·68	55·91	822·3	5·51	29·74	47·13

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT J.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, the NORTH BRITISH DISTRICT during the Year 1882, with the Ratios

Orders.	Average Strength, 3,238. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.– *General Diseases.*				
	Febrile Group.				
	Eruptive Fevers { Small-pox	—	—	—	—
	Eruptive Fevers { Other	8	—	—	·12
	Continued „ { Enteric	1	1	—	·02
	Continued „ { Other	24	—	—	1·16
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	29	—	—	·75
	Cholera	—	—	—	—
	Other diseases	49	—	—	1·47
	Total	111	2	—	3·52
	Constitutional Group.				
	Rheumatism	136	—	2	6·39
	Primary Syphilis	375	—	—	17·44
	Secondary „	94	—	—	6·07
	Tubercular Diseases	42	6	14	6·58
	Scurvy and Purpura	—	—	—	—
	Other diseases	5	—	—	·40
	Total	552	6	16	36·88
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	43	—	15	4·09
2	Eye	68	—	2	2·75
3	Ear	17	—	5	1·62
4	Nose	2	—	—	·09
5	Circulatory System	50	2	9	3·38
6	Absorbent „	35	—	—	2·83
7	Ductless Glands	1	—	—	·02
8	Respiratory System	234	4	1	9·91
9	Digestive „	328	2	5	9·52
10	Urinary System { Gonorrhœa	301	—	—	13·47
10	Urinary System { Sequelæ of Gonorrhœa	58	—	—	3·64
10	Urinary System { Other diseases	45	—	2	2·85
11	Generative System	36	—	1	1·24
12	Organs of Locomotion	33	—	7	2·95
13	Cellular Tissue	86	1	—	3·43
14	Cutaneous System	314	—	—	10·56
	III.—*Debility*	30	—	3	1·66
	IV.—*Poisons*	3	—	—	·09
	V.—*Injuries.*				
1	General	—	—	—	—
2	Local	386	—	6	13·57
3	In action	2	—	2	·02
	No appreciable disease	7	—	—	·33
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	2,742	17	74	128·42

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879.

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	—	—	—	11·4	·10	—	·41
2.5	—	—	·04				
·3	.31	—	·01	13·1	·10	—	·39
7·4	—	—	·36				
—	—	—	—	—	—	—	—
9·0	—	—	·23	26·5	·20	—	·88
—	—	—	—	—	—	—	—
15·1	·31	—	·45	7·4	—	—	·28
34·3	·61	—	1·09	58·4	·40	—	1·96
42·0	—	·61	1·97	38·3	·20	1·28	1·68
84·9	—	—	5·89	60·0	—	—	3·87
29·0	—	—	1·88	35·8	·10	·69	2·30
13·0	1·89	4·32	2·03	13·5	2·17	5·72	1·53
—	—	—	—	·3	—	—	·03
1·5	—	—	·12	·9	·10	—	·06
170·4	1·89	4·94	11·39	148·8	2·56	7·69	9·47
13·3	—	4·63	1·26	13·3	·69	2·37	·99
21·0	—	·61	·85	12·2	—	·20	·90
5·2	—	1·55	·50	3·1	—	·30	·16
·6	—	—	·03	·4	—	—	·04
15·4	·61	2·77	1·04	17·2	1·28	5·62	1·16
10·8	—	—	·87	11·6	—	—	·76
·3	—	—	·01	·2	—	—	·01
72·3	1·23	·31	3·06	92·3	2·16	1·08	3·65
101·3	·61	1·55	2·94	105·6	·49	2·17	3·65
93·0	—	—	4·16	84·0	—	—	4·09
17·9	—	—	1·13	12·9	—	·10	·60
13·9	—	·61	·88	14·9	·49	·79	·62
11·1	—	·31	·38	12·5	—	·49	·53
10·2	—	2·16	·91	5·2	·20	1·08	·42
26·6	·31	—	1·06	26·9	—	·20	1·02
97·0	—	—	3·26	120·6	—	·20	4·40
9·3	—	·92	·51	12·6	—	1·87	·73
·9	—	—	·08	2·1	·20	—	·06
—	—	—	—	—	·59	—	—
119·2	—	1·89	4·19	128·4	·59	·98	5·00
·6	—	·61	·01	—	—	—	—
2·2	—	—	·10	1·6	—	—	·05
—	—	—	—	—	—	—	—
846·8	5·25	22·85	39·66	884·8	9·66	25·14	40·27

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884 &c., &c.

ABSTRACT K.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, the CHANNEL ISLANDS DISTRICT during the Year 1882, with the Ratios

Orders.	Average Strength, 1,274. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive Fevers { Small-pox	—	—	—	—
	Eruptive Fevers { Other	—	—	—	—
	Continued „ { Enteric	1	—	—	·26
	Continued „ { Other	14	—	—	·28
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	3	—	—	·03
	Cholera	—	—	—	—
	Other diseases	6	—	—	·35
	Total	24	—	—	·92
	Constitutional Group.				
	Rheumatism	39	—	2	2·71
	Primary Syphilis	114	—	—	11·59
	Secondary „	60	—	—	3·08
	Tubercular Diseases	8	1	3	·67
	Scurvy and Purpura	—	—	—	—
	Other diseases	—	—	—	—
	Total	221	1	5	18·05
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	20	1	2	1·70
2	Eye	7	—	—	·20
3	Ear	6	—	—	·13
4	Nose	2	—	—	·09
5	Circulatory System	14	1	2	·85
6	Absorbent „	11	—	—	·91
7	Ductless Glands	—	—	—	—
8	Respiratory System	69	2	4	2·99
9	Digestive „	140	—	3	5·07
10	Urinary System { Gonorrhœa	200	—	—	12·87
10	Urinary System { Sequelæ of Gonorrhœa	23	—	—	1·60
10	Urinary System { Other diseases	25	—	1	1·12
11	Generative System	12	—	—	·54
12	Organs of Locomotion	8	—	—	·54
13	Cellular Tissue	19	—	—	·51
14	Cutaneous System	175	—	1	5·96
	III.—*Debility*	7	—	3	·74
	IV.—*Poisons*	—	—	—	—
	V.—*Injuries.*				
1	General	—	—	—	—
2	Local	161	—	3	4·95
3	In action	—	—	—	—
	No appreciable disease	6	—	—	·08
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	1,150	5	24	59·82

The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	—	—	—	1·0	—	—	·05
—	—	—	—			—	
·8	—	—	·20	24·8	—	—	·73
11·0	—	—	·22			—	
—	—	—	—	—	—	—	—
2·3	—	—	·02	5·7	—	—	·11
—	—	—	—	—	—	—	—
4·7	—	—	·27	1·5	—	—	·15
18·8	—	—	·72	33·0	—	—	1·04
30·6	—	1·57	2·13	34·9	—	·25	1·65
89·5	—	—	9·10	122·5	—	—	9·50
47·1	—	—	2·42	24·1	—	·25	1·39
6·3	·79	2·35	·52	7·4	3·20	1·97	1·17
—	—	—	—	—	—	—	—
—	—	—	—	5·2	—	—	·25
173·5	·79	3·92	14·17	194·1	3·20	2·46	13·96
15·7	·79	1·57	1·33	7·6	·25	1·97	·71
5·5	—	—	·16	19·7	—	·74	·91
4·7	—	—	·10	3·7	—	·49	·16
1·6	—	—	·07	·2	—	—	—
11·0	·79	1·57	·67	13·8	·49	1·97	·78
8·6	—	—	·71	38·6	—	—	3·66
—	—	—	—	—	—	—	—
54·2	1·57	3·14	2·35	78·5	·49	·74	2·94
109·9	—	2·35	3·98	108·5	·25	·74	2·90
157·0	—	—	10·08	154·8	—	—	7·23
18·0	—	—	1·26	23·6	—	—	1·19
19·6	—	·79	·88	13·0	—	—	·38
9·4	—	—	·42	8·4	—	—	·25
6·3	—	—	·42	5·7	—	·98	·67
14·9	—	—	·40	18·8	—	—	·55
137·4	—	·79	4·68	127·7	—	—	4·03
5·5	—	2·35	·58	9·1	—	2·21	·78
—	—	—	—	5·9	·25	—	·12
—	—	—	—	·2	·98	—	·04
126·4	—	2·35	3·89	157·0	·49	·98	5·31
—	—	—	—	—	—	—	—
4·7	—	—	·08	1·7	—	—	·07
—	—	—	—	—	—	—	—
902·7	3·92	18·84	46·95	1,023·6	6·40	13·29	47·68

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c. &c.

ABSTRACT L.—Table showing the Average Strength, Admissions, into Hospital, the Belfast District during the Year 1882, with the Ratios

Orders.	Average Strength, 3,002. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive Fevers { Small-pox	1	1	—	·02
	Eruptive Fevers { Other	8	—	—	·54
	Continued „ { Enteric	2	—	—	·20
	Continued „ { Other	48	—	—	1·02
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	10	—	1	·55
	Cholera	—	—	—	—
	Other diseases	15	—	—	·70
	Total	84	1	1	3·03
	Constitutional Group.				
	Rheumatism	80	—	4	4·98
	Primary Syphilis	325	—	—	26·30
	Secondary „	59	—	—	3·08
	Tubercular Diseases	17	5	7	2·08
	Scurvy and Purpura	1	—	—	·20
	Other diseases	—	—	—	—
	Total	482	5	11	36·64
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	22	—	4	1·94
2	Eye	23	—	2	1·36
3	Ear	13	—	1	·45
4	Nose	3	—	—	·04
5	Circulatory System	17	5	6	1·42
6	Absorbent „	38	—	—	4·06
7	Ductless Glands	—	—	—	—
8	Respiratory System	124	5	3	5·62
9	Digestive „	241	1	1	6·78
10	Urinary System { Gonorrhœa	336	—	—	20·45
10	Urinary System { Sequelæ of Gonorrhœa	14	—	—	·57
10	Urinary System { Other diseases	24	1	1	·86
11	Generative System	25	—	—	·79
12	Organs of Locomotion	9	—	2	·42
13	Cellular Tissue	55	—	—	1·92
14	Cutaneous System	291	—	1	9·53
	III.—*Debility*	35	—	6	2·26
	IV.—*Poisons*	6	—	—	·20
	V.—*Injuries.*				
1	General	—	3	—	—
2	Local	271	1	5	10·90
3	In action	—	—	—	—
	No appreciable disease	14	—	—	·51
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	2,127	22	44	109·75

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
·3	·33	—	·01	3·8	·13	—	·23
2·7	—	—	·18				
·7	—	—	·07				
16·0	—	—	·34	24·3	·54	—	·64
—	—	—	—	—	—	—	—
3·3	—	·33	·18	8·6	—	—	·20
—	—	—	—	—	—	—	—
5·0	—	—	·23	10·9	—	—	·40
28·0	·33	·33	1·01	47·6	·67	—	1·47
26·6	—	1·33	1·66	50·1	—	2·42	2·37
108·3	—	—	8·76	124·3	—	—	7·76
19·7	—	—	1·03	33·1	·13	·40	2·06
5·7	1·67	2·33	·69	12·6	2·02	4·17	1·12
·3	—	—	·07	·3	—	—	·02
—	—	—	—	1·1	·13	—	·08
160·6	1·67	3·66	12·21	221·5	2·28	6·99	13·41
7·3	—	1.33	·65	14·8	·27	2·56	1·22
7·7	—	·67	·45	19·4	—	·94	·89
4·3	—	·33	·15	5·0	—	·54	·18
1·0	—	—	·01	·1	—	—	·02
5·7	1·67	2·00	·47	17·6	1·21	3·77	1·03
12·6	—	—	1·35	20·9	—	—	1·52
—	—	—	—	—	—	—	—
41·3	1·67	1·00	1·87	84·0	1·35	2·02	3·43
80·3	·33	·33	2·26	112·2	·54	1·61	2·84
111·9	—	—	6·81	107·4	—	—	4·71
4·7	—	—	·19	7·4	—	—	·44
8·0	·33	·33	·29	11·0	·13	·27	·51
8·3	—	—	·26	12·4	—	·54	·41
3·0	—	·67	·14	6·2	·13	1·61	·55
18·3	—	—	·64	23·3	—	—	·81
96·9	—	·33	3·18	130·1	—	·40	4·80
11·6	—	2·00	·75	13·2	—	3·10	·73
2·0	—	—	·07	2·7	·13	—	·06
—	1·00	—	—	·4	·27	—	·01
90·3	·33	1·67	3·63	105·6	·27	·81	3·27
—	—	—	—	—	—	—	—
4·7	—	—	·17	1·9	—	—	·14
—	—	—	—	—	—	—	—
708·5	7·33	14·65	36·56	964·7	7·26	25·16	42·45

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT M.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, the DUBLIN DISTRICT during the Year 1882, with the Ratios

Orders.	Average Strength, 13,381. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive Fevers { Small pox	3	—	—	·13
	Eruptive Fevers { Other	164	4	—	8·22
	Continued „ { Enteric	29	6	—	2·23
	Continued „ { Other	235	2	—	8·38
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	80	—	—	2·43
	Cholera	—	—	—	—
	Other diseases	130	5	—	4·74
	Total	641	17	—	26·13
	Constitutional Group.				
	Rheumatism	490	—	10	27·73
	Primary Syphilis	1,998	—	—	141·79
	Secondary „	506	1	8	33·79
	Tubercular Diseases	119	16	81	19·43
	Scurvy and Purpura	—	—	—	·28
	Other diseases	9	1	—	·54
	Total	3,122	18	99	223·56
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	143	5	35	20·89
2	Eye	209	—	10	11·24
3	Ear	108	—	15	6·38
4	Nose	6	—	—	·14
5	Circulatory System	148	10	49	13·29
6	Absorbent „	175	—	—	13·91
7	Ductless Glands	2	—	4	·19
8	Respiratory System	1,241	26	11	59·68
9	Digestive „	1,559	8	88	50·13
10	Urinary System { Gonorrhœa	1,717	—	—	94·71
10	Urinary System { Sequelæ of Gonorrhœa	160	—	—	8·82
10	Urinary System { Other diseases	242	—	8	9·51
11	Generative System	176	—	5	8·18
12	Organs of Locomotion	85	—	24	7·57
13	Cellular Tissue	301	—	3	13·39
4	Cutaneous System	1,592	—	8	59·83
	III.—*Debility*	108	—	16	7·20
	IV.—*Poisons*	23	2	—	·48
	V.—*Injuries.*				
1	General	2	11	—	·04
2	Local	1,557	4	7	59·08
3	In action	—	—	—	—
	No appreciable disease	53	—	—	1·26
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	13,365	101	382	695·61

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
·3	—	—	·01	3·4	·03	—	·18
12·2	·30	—	·61				
2·2	·45	—	·17	17·3	·28	—	·69
17·5	·15	—	·63				
—	—	—	—	—	—	—	—
6·0	—	—	·18	4·6	·03	·03	·14
—	—	—	—	—	—	—	—
9·7	·37	—	·35	3·6	·06	—	·15
47·9	1·27	—	1·95	28·9	·40	·03	1·16
36·6	—	·75	2·07	31·0	·09	·78	1·58
149·3	—	—	10·60	124·3	—	—	9·88
37·8	·07	·60	2·53	31·1	·03	·37	2·07
8·9	1·20	6·05	1·45	8·4	1·65	2·78	1·06
—	—	—	·02	·4	—	—	·02
·7	·07	—	·04	·9	—	—	·09
233·3	1·34	7·40	16·71	196·6	1·77	3·88	14·70
10·7	·37	2·62	1·56	11·1	·46	2·60	1·43
15·6	—	·75	·84	14·7	—	·76	·75
7·7	—	1·12	·48	4·4	—	·34	·22
·4	—	—	·01	·4	—	·03	·02
11·1	·75	3·66	·99	13·0	·52	2·63	1·17
13·1	—	—	1·04	15·0	—	·09	1·24
·1	—	·30	·01	—	—	—	—
92·7	1·94	·82	4·46	70·9	1·07	·82	3·65
116·5	·60	2·84	3·75	85·2	·55	·89	2·51
128·3	—	—	7·08	100·7	—	—	5·96
12·0	—	—	·66	11·7	—	·03	·85
18·1	—	·60	·71	14·3	·21	·25	·66
13·2	—	·37	·61	11·2	—	—	·62
6·3	—	1·79	·56	7·1	·03	1·19	·56
22·5	—	·22	1·00	22·8	—	·06	·99
119·0	—	·60	4·47	117·9	—	·25	4·54
8·1	—	1·20	·54	6·5	—	·79	·47
1·7	·15	—	·04	2·1	·06	—	·06
·1	·82	—	—	—	·40	—	—
116·4	·30	·52	4·42	106·9	·15	·46	4·00
—	—	—	—	—	—	—	—
4·0	—	—	·09	2·4	—	—	·11
—	—	—	—	—	—	—	—
998·8	7·55	24·81	51·98	843·8	5·62	15·10	45·67

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT N.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, the CORK DISTRICT during the Year 1882, with the Ratios per

Orders.	Average Strength, 9,684. Diseases.	Admissions into Hospital.	Deaths.	Invalids Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*				
	Febrile Group.				
	Eruptive fevers { Small-pox	—	—	—	—
	Other	28	1	—	1·01
	Continued „ { Enteric	8	1	—	·79
	Other	135	—	—	4·45
	Yellow Fever	—	—	—	—
	Paroxysmal Fevers	49	—	—	1·31
	Cholera	—	—	—	—
	Other diseases	59	1	—	1·45
	Total	279	3	—	9·01
	Constitutional Group.				
	Rheumatism	302	—	4	14·47
	Primary Syphilis	528	—	—	36·52
	Secondary „	218	—	5	14·29
	Tubercular Diseases	90	13	27	11·01
	Scurvy and Purpura	—	—	—	—
	Other diseases	18	—	3	·67
	Total	1,156	13	39	76·96
	II.—*Local Diseases.*				
	Diseases of the—				
1	Nervous System	118	6	27	8·07
2	Eye	121	—	6	4·43
3	Ear	51	—	3	2·35
4	Nose	7	—	—	·18
5	Circulatory System	96	6	27	6·08
6	Absorbent „	60	—	—	3·21
7	Ductless Glands	—	—	—	—
8	Respiratory System	578	9	5	25·70
9	Digestive „	984	2	13	26·80
10	Urinary System { Gonorrhœa	557	—	—	30·65
	Sequelæ of Gonorrhœa	82	—	—	4·97
	Other diseases	110	1	1	4·29
11	Generative System	78	—	—	3·52
12	Organs of Locomotion	51	1	10	3·40
13	Cellular Tissue	200	—	1	7·14
14	Cutaneous System	869	—	1	27·97
	III.—*Debility*	88	1	20	7·22
	IV.—*Poisons*	13	2	—	·79
	V.—*Injuries.*				
1	General	—	2	—	—
2	Local	1,096	4	9	34·98
3	In action	—	—	—	—
	No appreciable disease	20	—	—	·86
	Cause unknown (refers to deaths only)	—	—	—	—
	General total	6,614	50	162	288·58

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed in 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.				Average Ratio per 1,000 from 1879 to 1881.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	—	—	—	5·4	·34	—	·38
2·9	·10	—	·11				
·8	·10	—	·08	30·4	·87	—	1·22
14·0	—	—	·46				
—	—	—	—	—	—	—	—
5·1	—	—	·14	14·9	—	—	·41
—	—	—	—	—	—	—	—
6·1	·10	—	·15	11·6	—	—	·33
28·9	·31	—	·94	62·3	1·21	—	2·34
31·4	—	·42	1·50	35·4	—	·77	1·80
54·8	—	—	3·79	64·5	—	—	4·54
22·6	—	·52	1·48	19·7	·05	·14	1·44
9·3	1·35	2·80	1·14	10·2	1·73	3·13	1·03
—	—	—	—	·3	—	—	·04
1·9	—	·31	·07	1·5	·05	·10	·09
120·0	1·35	4·05	7·98	131·6	1·83	4·14	8·94
12·2	·62	2·80	·84	12·1	·29	2·02	·81
12·6	—	·62	·46	15·3	—	·87	·76
5·3	—	·31	·24	7·1	—	·39	·39
·7	—	—	·02	·6	—	—	·02
10·0	·62	2·80	·63	14·3	·58	3·04	1·06
6·2	—	—	·33	8·4	·05	·10	·47
—	—	—	—	·1	—	—	
60·0	·94	·52	2·67	66·5	1·25	·62	2·65
102·1	·21	1·35	2·78	114·4	·43	1·06	3·21
57·8	—	—	3·18	70·1	—	—	3·41
8·5	—	—	·52	8·3	—	·14	·60
11·4	·10	·10	·45	10·4	·05	·34	·44
8·1	—	—	·37	11·8	—	·05	·56
5·3	·10	1·04	·35	6·2	·14	·63	·42
20·8	—	·10	·74	22·5	—	—	1·02
90·2	—	·10	2·90	122·6	—	·29	4·65
9·1	·10	2·08	·75	8·1	—	·96	·55
1·4	·21	—	·08	1·1	·05	—	·03
—	·21	—	—	·1	·48	—	·01
113·8	·42	·94	3·63	121·6	·19	·63	4·15
—	—	—	—	—	—	—	—
2·1	—	—	·09	3·7	—	—	·09
—	—	—	—	—	—	—	—
686·5	5·19	16·81	29·95	819·2	6·50	15·28	36·58

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT No. II.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into stationed at GIBRALTAR during the year 1882, with the Ratios per

Orders.	Average Strength, 4,558. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*							
	Febrile Group.							
	Eruptive Fevers { Small Pox	—	—	—	—	—	—	—
	Eruptive Fevers { Other	7	—	—	—	—	—	·19
	Continued „ { Enteric	40	18	—	18	—	—	3·47
	Continued „ { Other	862	4	—	4	11	—	49·53
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	2	—	—	—	—	3	·13
	Cholera	—	—	—	—	—	—	—
	Other Diseases	9	1	—	1	—	—	·34
	Total	920	23	—	23	11	3	53·66
	Constitutional Group.							
	Rheumatism	155	—	—	—	1	—	12·11
	Primary Syphilis	387	—	—	—	—	—	30·56
	Secondary „	59	—	—	—	1	1	4·77
	Tubercular diseases	24	5	1	6	10	6	4·46
	Scurvy and Purpura	—	—	—	—	—	—	—
	Other Diseases	2	1	—	1	—	—	·03
	Total	627	6	1	7	12	7	51·93
	II.—*Local Diseases.*							
	Diseases of the—							
1	Nervous System	25	—	—	—	9	3	3·44
2	Eye	68	—	—	—	—	—	2·89
3	Ear	18	—	—	—	—	1	1·11
4	Nose	—	—	—	—	—	—	—
5	Circulatory System	29	4	—	4	15	11	3·16
6	Absorbent „	62	—	—	—	—	—	6·47
7	Ductless Glands	1	—	—	—	—	—	·04
8	Respiratory System	133	2	—	2	2	5	10·08
9	Digestive „	490	4	—	4	3	3	19·10
10	Urinary System { Gonorrhœa	478	—	—	—	—	—	30·52
10	Urinary System { Sequelæ of Gonorr.	16	—	—	—	—	—	·64
10	Urinary System { Other diseases	51	1	—	1	6	3	4·28
11	Generative System	61	—	—	—	—	—	3·79
12	Organs of Locomotion	14	—	—	—	2	2	1·46
13	Cellular Tissue	109	—	—	—	—	—	5·35
14	Cutaneous System	231	—	—	—	—	—	12·69
	III.—*Debility*	23	—	—	—	4	2	1·95
	IV.—*Poisons*	10	—	—	—	—	—	·40
	V.—*Injuries.*							
1	General	1	2	—	2	—	—	·26
2	Local	349	4	—	4	3	4	16·03
3	In action	—	—	—	—	—	—	—
	No appreciable disease	6	—	—	—	—	—	·28
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	
	General total	3,722	46	1	47	67	44	229·53
	*Average of 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Ratio per 1,000 from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	} ·9	—	—	—	·09
1·5	—	—	—	·04					
8·8	3·95	—	—	·76	} 130·7	1·04	1·19	—	8·00
189·1	·88	2·41	—	10·87					
—	—	—	—	—	—	—	—	—	—
·4	—	—	·66	·03	99·4	1·12	11·68	·74	3·65
—	—	—	—	—	—	—	—	—	—
2·0	·22	—	—	·07	1·5	—	—	—	·08
201·8	5·04	2·41	·66	11·77	232·5	2·16	12·87	·74	11·82
34·0	—	·22	—	2·66	57·0	—	4·09	·89	4·28
84·9	—	—	—	6·70	61·9	—	—	—	6·08
13·0	—	·22	·22	1·04	9·3	—	·07	·30	·75
5·3	1·31	2·19	1·32	·98	5·5	·97	3·35	2·83	·66
—	—	—	—	—	·5	—	—	—	·03
·4	·22	—	—	·01	·5	·22	·15	·15	·09
137·6	1·53	2·63	1·54	11·39	134·7	1·19	7·66	4·17	11·89
5·5	—	1·97	·65	·76	4·9	·22	1·27	·52	·51
14·9	—	—	—	·63	12·4	—	1·64	1·19	·92
3·9	—	—	·22	·24	4·8	—	·45	·52	·25
—	—	—	—	—	·7	—	—	—	·04
6·4	·88	3·29	2·41	·69	7·9	·82	3·50	2·31	·65
13·6	—	—	—	1·42	24·9	—	·37	·15	2·43
·2	—	—	—	·01	·1	—	—	—	—
29·2	·44	·44	1·10	2·21	39·1	·89	3·05	·82	2·84
107·5	·88	·66	·66	4·19	84·9	·22	2·08	1·64	3·73
104·9	—	—	—	6·70	65·8	—	—	—	3·86
3·5	—	—	—	·14	6·1	—	—	·07	·39
11·2	·22	1·32	·66	·94	7·2	·15	·22	·07	·47
13·4	—	—	—	·83	15·4	—	·07	·15	1·08
3·1	—	·44	·44	·32	5·7	—	·89	1·04	·42
23·9	—	—	—	1·17	26·3	—	·37	·22	1·38
50·7	—	—	—	2·78	39·3	—	·22	·15	1·71
5·0	—	·88	·44	·43	13·0	—	5·80	1·93	·99
2·2	—	—	—	·09	7·0	·07	—	—	·21
·2	·44	—	—	·06	—	·15	—	—	—
76·6	·88	·66	·88	3·52	79·6	·37	1·34	1·12	3·47
—	—	—	—	—	—	—	—	—	—
1·3	—	—	—	·06	1·1	—	—	—	·06
—	—	—	—	—	—	—	—	—	—
816·6	10·31	14·70	9·65	50·35	813·4	6·25	41·81	16·81	49·12
689·5	6·53	30·66	15·60	39·37	—	—	—	—	—

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT No. III.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into stationed at MALTA during the year 1882, with the Ratios per

Orders.	Average Strength, 4,619. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*							
	Febrile Group.							
	Eruptive Fevers { Small-pox	—	—	—	—	—	—	—
	Eruptive Fevers { Other	12	—	—	—	—	—	·85
	Continued „ { Enteric	78	13	—	13	1	—	13·70
	Continued „ { Other	516	1	—	1	11	—	25·60
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	20	—	—	—	4	3	3·04
	Cholera	—	—	—	—	—	—	—
	Other Diseases	7	—	—	—	—	—	·24
	Total	633	14	—	14	16	3	43·43
	Constitutional Group.							
	Rheumatism	126	—	—	—	12	1	11·49
	Primary Syphilis	163	—	—	—	—	—	14·44
	Secondary „	54	—	—	—	3	—	3·60
	Tubercular diseases	44	2	3	5	33	17	7·22
	Scurvy and Purpura	2	1	—	1	—	—	·11
	Other Diseases	6	—	—	—	—	1	1·20
	Total	395	3	3	6	48	19	38·06
	II.—*Local Diseases.* Diseases of the—							
1	Nervous System	47	3	—	3	18	3	7·39
2	Eye	85	—	—	—	5	2	4·94
3	Ear	57	—	—	—	10	15	5·35
4	Nose	1	—	—	—	—	—	·05
5	Circulatory System	41	1	—	1	16	17	4·37
6	Absorbent „	37	—	—	—	—	—	4·56
7	Ductless glands	1	—	—	—	—	—	·24
8	Respiratory System	143	6	—	6	11	9	12·61
9	Digestive „	525	4	—	4	13	5	21·50
10	Urinary System { Gonorrhœa	398	—	—	—	—	—	27·58
10	Urinary System { Sequelæ of Gonorr.	35	—	—	—	—	—	2·67
10	Urinary System { Other diseases	72	—	—	—	1	1	4·32
11	Generative System	31	—	—	—	—	—	2·81
12	Organs of Locomotion	31	—	—	—	7	6	3·23
13	Cellular Tissue	99	—	—	—	1	—	6·55
14	Cutaneous System	386	—	—	—	1	—	18·72
	III.—*Debility*	74	—	—	—	18	11	6·46
	IV.—*Poisons*	40	3	—	3	—	—	·91
	V.—*Injuries.*							
1	General	1	2	—	2	—	—	·19
2	Local	557	2	—	2	3	2	25·12
3	In action	—	—	—	—	—	—	—
	No appreciable disease	26	—	—	—	—	—	·76
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General total	3,715	38	3	41	168	93	241·82
	Average of 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	} 5·7	·07	—	—	·19
2·6	—	—	—	·18					
16·9	2·81	·22	—	2·97	} 186·5	3·12	·21	—	8·69
111·7	·22	2·38	—	5·54					
—	—	—	—	—	—	—	—	—	—
4·3	—	·87	·65	·66	10·4	·57	·07	·28	·87
—	—	—	—	—	—	—	—	—	—
1·5	—	—	—	·05	7·7	—	—	—	·38
137·0	3·03	3·46	·65	9·40	210·3	3·76	·28	·28	10·13
27·3	—	2·60	·22	2·49	36·0	·14	1·56	·64	2·69
35·3	—	—	—	3·13	27·6	—	—	—	2·22
11·7	—	·65	—	·78	9·5	—	·71	·57	·85
9·5	1·08	7·14	3·68	1·56	7·5	1·99	2·34	1·70	1·28
·4	·22	—	—	·02	·1	—	—	—	·05
1·3	—	—	22	·26	2·1	·14	·21	·14	·19
85·5	1·30	10·39	4·11	8·24	82·8	2·27	4·82	3·05	7·23
10·2	·65	3·90	·65	1·60	12·9	·57	4·04	·64	1·24
18·4	—	1·08	·43	1·07	22·1	—	1·77	1·21	1·45
12·3	—	2·16	3·25	1·16	9·8	—	1·35	·64	·84
·2	—	—	—	·01	1·0	—	—	—	·05
8·9	·22	3·46	3·68	·94	12·3	·92	2·77	1·91	1·29
8·0	—	—	—	·99	3·3	—	—	—	·14
·2	—	—	—	·05	·3	—	—	—	·02
31·0	1·30	2·38	1·95	2·73	43·8	·57	2·48	·78	3·69
113·7	·87	2·81	1·08	4·65	146·3	·35	1·42	·57	5·32
86·2	—	—	—	5·97	61·5	—	—	—	3·38
7·6	—	—	—	·58	9·8	—	·21	·21	·73
15·6	—	·22	·22	·94	7·0	—	·14	·07	·39
6·7	—	—	—	·61	11·6	—	·07	·14	·79
6·7	—	1·52	1·30	·70	6·7	—	·78	·42	·77
21·4	—	22	—	1·42	30·8	—	·21	—	1·40
83·6	—	·22	—	4·05	73·4	—	·85	—	4·15
16·0	—	3·90	2·38	1·40	20·2	·07	4·61	1·28	2·22
8·7	·65	—	—	·20	4·5	—	—	—	·10
·2	·43	—	—	·04	1·1	·71	—	—	·06
120·6	·43	·65	·43	5·44	104·9	·71	·57	·64	4·76
—	—	—	—	—	—	—	—	—	—
5·6	—	—	—	·16	1·1	—	—	—	·03
—	—	—	—	—	—	—	—	—	—
804·3	8·88	86·37	20·13	52·35	877·5	9·93	26·37	11·84	50·23
876·6	9·67	28·40	16·05	46·13	—	—	—	—	—

to 1883 will be given in the Report for 1883 those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT No. IIIa.—Table showing the Average Strength, Admissions into Malta Fencible Artillery Troops stationed at Malta during the Year 1882,

Orders.	Average Strength, 317. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
	I.—*General Diseases.* *Febrile Group.*							
	Eruptive Fevers { Small-pox	—	—	—	—	—	—	—
	Eruptive Fevers { Others	1	—	—	—	—	—	·01
	Continued „ { Enteric	—	—	—	—	—	—	—
	Continued „ { Others	20	—	—	—	—	—	·28
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	12	—	—	—	—	—	·38
	Cholera	—	—	—	—	—	—	—
	Other diseases	—	—	—	—	—	—	—
	Total	33	—	—	—	—	—	·67
	Constitutional Group.							
	Rheumatism	8	—	—	—	—	—	·48
	Primary Syphilis	5	—	—	—	—	—	·32
	Secondary „	—	—	—	—	—	—	—
	Tubercular diseases	5	2	—	2	—	1	·38
	Scurvy and Purpura	—	—	—	—	—	—	—
	Other diseases	3	—	—	—	—	—	·20
	Total	21	2	—	2	—	1	1·38
	II.—*Local Diseases.* Diseases of the—							
1	Nervous System	1	—	—	—	—	—	·03
2	Eye	7	—	—	—	—	—	·14
3	Ear	1	—	—	—	—	—	—
4	Nose	—	—	—	—	—	—	—
5	Circulatory System	1	1	—	1	—	—	·18
6	Absorbent „	—	—	—	—	—	—	—
7	Ductless Glands	—	—	—	—	—	—	—
8	Respiratory System	36	1	—	1	—	1	1·88
9	Digestive „	24	—	—	—	—	—	·64
10	Urinary System { Gonorrhœa	9	—	—	—	—	—	·63
10	Urinary System { Sequelæ of Gonorr.	1	—	—	—	—	—	·03
10	Urinary System { Other diseases	—	—	—	—	—	—	—
11	Generative System	3	—	—	—	—	—	·12
12	Organs of Locomotion	—	—	—	—	—	—	—
13	Cellular Tissue	2	—	—	—	—	—	·09
14	Cutaneous System	19	—	—	—	—	—	·46
	III.—*Debility*	5	—	—	—	—	3	·31
	IV.—*Poisons*	—	—	—	—	—	—	—
	V.—*Injuries.*							
1	General	—	—	—	—	—	—	—
2	Local	29	—	—	—	—	—	·67
3	In action	—	—	—	—	—	—	—
	No appreciable disease	—	—	—	—	—	—	—
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General total	192	4	—	4	—	5	7·23
	Average of 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the ROYAL with the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	} 2·9	—	—	—	·13
3·1	—	—	—	·03					
—	—	—	—	—	} 145·4	—	—	—	3·30
63·1	—	—	—	·88					
—	—	—	—	—	—	—	—	—	—
37·9	—	—	—	1·20	5·8	1·93	—	—	·82
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1·0	—	—	—	·02
104·1	—	—	—	2·11	155·1	1·93	—	—	4·27
25·2	—	—	—	1·51	20·2	—	—	3·85	·60
15·8	—	—	—	1·01	6·7	—	—	—	·42
—	—	—	—	—	8·7	—	—	—	·61
15·8	6·31	—	3·15	1·20	11·6	2·89	—	2·89	1·74
—	—	—	—	—	—	—	—	—	—
9·5	—	—	—	·63	2·9	—	—	—	·18
66·3	6·31	—	3·15	4·35	50·1	2·89	—	6·74	3·55
3·1	—	—	—	·10	3·9	—	—	2·89	·70
22·1	—	—	—	·44	22·1	—	—	3·85	·41
3·1	—	—	—	—	1·9	—	—	—	·03
—	—	—	—	—	—	—	—	—	—
3·1	3·15	—	—	·57	8·7	·96	—	5·78	·72
—	—	—	—	—	3·9	—	—	—	·18
—	—	—	—	—	1·0	—	—	—	·06
113·6	3·15	—	3·15	5.93	49·1	—	—	·96	2·69
75·7	—	—	—	2·02	71·3	—	—	3·85	2·33
28·4	—	—	—	1·99	27·8	—	—	—	1·43
3·1	—	—	—	·10	1·0	—	—	—	·08
—	—	—	—	—	1·0	—	—	—	·02
9·5	—	—	—	·38	3·9	—	—	—	·06
—	—	—	—	—	1·9	—	—	—	·10
6·3	—	—	—	·28	5·8	—	—	—	·23
60·0	—	—	—	1·45	75·1	—	—	1·93	2·34
15·8	—	—	9·46	·98	15·4	—	—	4·81	·84
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	·96	—	—	—
91·5	—	—	—	2·11	98·3	—	—	—	2·51
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1·0	—	—	—	·04
—	—	—	—	—	—	—	—	—	—
605·7	12·62	—	15·77	22·81	598·3	6·74	—	30·82	22·59
696·9	6·42	—	30·83	22·16	—	—	—	—	—

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT No. IV.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into stationed at CYPRUS during the Year 1882, with the Ratios per

Orders.	Average Strength, 595. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
	I.—*General Diseases.* *Febrile Group.*							
	Eruptive Fevers { Small-pox	—	—	—	—	—	—	—
	Eruptive Fevers { Other	1	—	—	—	—	—	·03
	Continued „ { Enteric	21	3	—	3	1	—	2·85
	Continued „ { Other	76	—	—	—	—	—	1·63
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	107	—	—	—	3	—	3·82
	Cholera	—	—	—	—	—	—	—
	Other diseases	—	—	—	—	—	—	—
	Total	205	3	—	3	4	—	8·33
	Constitutional Group.							
	Rheumatism	21	—	—	—	2	—	1·03
	Primary Syphilis	29	—	—	—	—	—	2·02
	Secondary „	16	—	—	—	—	—	·65
	Tubercular diseases	—	—	—	—	—	—	—
	Scurvy and Purpura	—	—	—	—	—	—	—
	Other diseases	—	—	—	—	—	—	—
	Total	66	—	—	—	2	—	3·70
	II.—*Local Diseases.* Diseases of the—							
1	Nervous System	7	—	—	—	—	—	·35
2	Eye	13	—	—	—	—	—	1·11
3	Ear	1	—	—	—	—	—	·01
4	Nose	—	—	—	—	—	—	—
5	Circulatory System	4	1	—	1	—	—	·34
6	Absorbent „	5	—	—	—	—	—	·61
7	Ductless Glands	—	—	—	—	—	—	—
8	Respiratory System	17	—	—	—	1	—	1·04
9	Digestive „	109	1	—	1	2	—	3.44
10	Urinary System { Gonorrhœa	59	—	—	—	—	—	3·70
10	Urinary System { Sequelæ of Gonorr.	11	—	—	—	—	—	·54
10	Urinary System { Other diseases	3	—	—	—	—	—	·07
11	Generative System	5	—	—	—	—	—	·32
12	Organs of Locomotion	2	—	—	—	—	—	·20
13	Cellular Tissue	7	—	—	—	—	—	·28
14	Cutaneous System	31	—	—	—	—	—	·94
	III.—*Debility*	16	—	—	—	4	—	1·03
	IV.—*Poisons*	2	2	—	2	—	—	·03
	V.—*Injuries.*							
1	General	—	—	—	—	—	—	—
2	Local	45	—	—	—	1	—	1·78
3	In action	—	—	—	—	—	—	—
	No appreciable disease	1	—	—	—	—	—	·03
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General Total	609	7	—	7	14	—	27·90
	Average of 4 years, 1878–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	—	—	—	—	—
1·7	—	—	—	·05	—	—	—	—	—
35·3	5·04	1·68	—	4·79	37·9	—	—	—	1·03
127·7	—	—	—	2·74					
—	—	—	—	—	—	—	—	—	—
179·8	—	5·04	—	6·42	318·0	4·66	7·32	2·66	9·11
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
344·5	5·04	6·72	—	14·00	355·9	4·66	7·32	2·66	10·14
35·3	—	3·36	—	1·73	30·6	—	1·33	·67	1·96
48·7	—	—	—	3·40	75·2	—	—	—	5·48
26·9	—	—	—	1·09	56·5	—	1·33	·67	4·15
—	—	—	—	—	2·7	—	—	3·32	·21
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1·3	—	·67	—	·33
110·9	—	3·36	—	6·22	166·3	—	3·32	4·66	12·13
11·8	—	—	—	·59	10·0	·67	·67	·67	·41
21·8	—	—	—	1·86	30·6	—	1·33	1·33	·73
1·7	—	—	—	·02	4·0	—	—	—	·32
—	—	—	—	—	—	—	—	—	—
6·7	1·68	—	—	·57	9·3	—	2·66	3·32	·78
8·4	—	—	—	1·02	3·3	—	—	—	·18
—	—	—	—	—	—	—	—	—	—
28·6	—	1·68	—	1·75	35·3	·67	1·33	1·33	1·26
183·2	1·68	3·36	-	5·78	171·7	2·66	1·33	2·66	5·66
99·2	—	—	—	6·22	63·2	—	—	—	4·00
18·5	—	—	—	·91	12·0	—	—	—	1·09
5·0	—	—	—	·12	2·0	·67	—	·67	·07
8·4	—	—	—	·54	10·6	—	—	—	·57
3·4	—	—	—	·34	5·3	—	·67	·67	·10
11·8	—	—	—	·47	22·0	—	1·33	·67	1·24
52·1	—	—	—	1·58	69·9	—	1·33	—	2·64
26·9	—	6·72	—	1·78	12·6	—	3·32	9·31	1·00
3·4	3·36	—	—	·05	9·3	—	—	—	·23
—	—	—	—	—	—	·67	—	—	—
75·6	—	1·68	—	2·99	117·1	1·33	·67	2·00	5·03
—	—	—	—	—	—	—	—	—	—
1·7	—	—	—	·13	·7	—	—	—	·01
—	—	—	—	—	—	—	—	—	—
1023·6	11·76	23·52	—	46·89	1111·1	11·31	25·28	29·94	47·59
2336·7	22·11	72·17	26·70	112·64	—	—	—	—	—

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT No. V.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into stationed at CANADA during the Year 1882, with the Ratios per

Orders.	Average Strength, 1,892. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*							
	Febrile Group.							
	Eruptive Fevers { Small-pox	—	—	—	—	—	—	—
	Eruptive Fevers { Other	5	—	—	—	—	—	·49
	Continued „ { Enteric	—	—	—	—	—	—	—
	Continued „ { Other	15	—	—	—	—	—	·45
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	4	—	—	—	—	—	·10
	Cholera	—	—	—	—	—	—	—
	Other Diseases	1	—	—	—	—	—	·01
	Total	25	—	—	—	—	—	1·05
	Constitutional Group.							
	Rheumatism	77	—	—	—	2	1	4·02
	Primary Syphilis	128	—	—	—	—	—	6·30
	Secondary „	111	—	—	—	1	6	6·91
	Tubercular diseases	11	1	1	2	1	9	1·04
	Scurvy and Purpura	—	—	—	—	—	—	—
	Other Diseases	5	—	—	—	1	—	·33
	Total	332	1	1	2	5	16	18·60
	II.—*Local Diseases.*							
	Diseases of the—							
1	Nervous System	11	—	—	—	—	1	·61
2	Eye	35	—	—	—	2	5	1·57
3	Ear	13	—	—	—	—	2	·46
4	Nose	—	—	—	—	—	—	—
5	Circulatory System	20	2	—	2	5	7	1·69
6	Absorbent „	22	—	—	—	—	1	1·81
7	Ductless Glands	—	—	—	—	—	—	—
8	Respiratory System	123	—	—	—	4	1	6·29
9	Digestive „	222	2	—	2	—	4	6·56
10	Urinary System { Gonorrhœa	117	—	—	—	—	—	6·08
10	Urinary System { Sequelæ of Gonorr.	23	—	—	—	—	—	1·32
10	Urinary System { Other diseases	24	—	—	—	1	3	·73
11	Generative System	26	—	—	—	—	—	1·32
12	Organs of Locomotion	14	—	—	—	4	2	1·29
13	Cellular Tissue	22	—	—	—	—	—	1·86
14	Cutaneous System	84	—	—	—	—	—	3·91
	III.—*Debility*	6	—	—	—	—	3	·16
	IV.—*Poisons*	46	1	—	1	—	—	1·40
	V.—*Injuries.*							
1	General	—	—	—	—	—	—	—
2	Local	179	—	—	—	—	1	5·51
3	In action	—	—	—	—	—	—	—
	No appreciable disease	—	—	—	—	—	—	—
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General total	1,344	6	1	7	21	46	62·22
	Average of 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879 to

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	} 3·6	—	—	—	·20
2·6	—	—	—	·26					
—	—	—	—	—	} 6·3	·20	—	—	·24
7·9	—	—	—	·24					
—	—	—	—	—	—	—	—	—	—
2·1	—	—	—	·05	89·4	—	5·53	—	2·37
—	—	—	—	—	—	—	—	—	—
·5	—	—	—	·00	4·5	—	—	—	·21
13·2	—	—	—	·55	103·8	·20	5·53	—	3·02
40·7	—	1·06	·53	2·13	89·5	·20	1·58	·79	3·57
67·7	—	—	—	3·33	97·5	—	—	—	8·75
58·7	—	·53	3·17	3·65	42·4	—	·99	·79	3·26
5·8	1·06	·53	4·76	·55	9·8	1·78	3·95	3·75	1·48
—	—	—	—	—	—	—	—	—	—
2·6	—	·53	—	·17	1·0	·20	·20	·20	·07
175·5	1·06	2·64	8·46	9·83	189·7	2·17	6·71	5·53	17·13
5·8	—	—	·53	·32	9·7	·20	2·76	1·18	1·06
18·5	—	1·06	2·64	·83	11·1	—	·99	1·38	·84
6·9	—	—	1·06	·24	3·7	—	·39	·59	·22
—	—	—	—	—	·6	—	—	·20	·01
10·6	1·06	2·64	3·70	·89	20·7	1·58	4·93	5·92	1·21
11·6	—	—	·53	·96	26·8	—	—	—	2·27
—	—	—	—	—	—	—	—	—	—
65·0	—	2·11	·53	3·32	58·4	·59	2·17	·79	1·86
117·4	1·06	—	2·11	3·47	108·0	·20	·79	·99	2·75
61·8	—	—	—	3·21	85·3	—	—	—	4·47
12·2	—	—	—	·70	11·6	—	—	·39	·58
12·7	—	·53	1·59	·39	17·2	·20	1·58	1·18	·69
13·7	—	—	—	·70	11·3	—	·20	·39	·69
7·4	—	2·11	1·06	·68	3·7	—	1·58	1·38	·37
11·6	—	—	—	·98	12·6	—	·20	—	·39
44·4	—	—	—	2·07	42·4	—	·20	·20	1·29
3·2	—	—	1·58	·08	6·3	—	1·97	1·58	·58
24·3	·53	—	—	·74	19·7	—	—	—	·67
—	—	—	—	—	—	·79	—	—	—
94·6	—	—	·53	2·91	112·3	—	1·18	·39	4·00
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	2·4	—	—	—	·06
—	—	—	—	—	—	—	—	—	—
710·4	3·70	11·10	24·31	32·88	857·3	5·92	31·18	22·10	44·11
671·8	6·51	21·59	15·50	31·76	—	—	—	—	—

1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c. &c.

ABSTRACT No. VI.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into TROOPS stationed at BERMUDA during the Year 1882, with the Ratios

Orders.	Average Strength, 1,446. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
	I. *General Diseases.*							
	Febrile Group.							
	Eruptive Fevers { Small-pox	—	—	—	—	—	—	—
	Eruptive Fevers { Other	—	—	—	—	—	—	—
	Continued „ { Enteric	21	2	—	2	—	—	2·21
	Continued „ { Other	70	—	—	—	—	—	1·65
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	3	—	—	—	—	—	·13
	Cholera	—	—	—	—	—	—	—
	Other diseases	—	—	—	—	—	—	—
	Total	94	2	—	2	—	—	3·99
	Constitutional Group.							
	Rheumatism	31	—	—	—	3	1	2·09
	Primary Syphilis	68	—	—	—	—	—	4·47
	Secondary „	10	—	—	—	—	—	1·23
	Tubercular diseases	16	2	1	3	5	3	2·61
	Scurvy and Purpura	—	—	—	—	—	—	—
	Other diseases	1	—	—	—	1	—	·38
	Total	126	2	1	3	9	4	10·78
	II. *Local Diseases.*							
	Diseases of the—							
1	Nervous System	5	1	1	2	2	—	·34
2	Eye	19	—	—	—	1	1	·90
3	Ear	10	—	—	—	1	1	·80
4	Nose	3	—	—	—	1	—	·19
5	Circulatory System	29	—	—	—	3	1	2·32
6	Absorbent „	36	—	—	—	—	—	4·98
7	Ductless Glands	—	—	—	—	—	—	—
8	Respiratory System	53	1	—	1	1	1	2·40
9	Digestive „	177	1	—	1	—	—	4·04
10	Urinary System { Gonorrhœa	34	—	—	—	—	—	1·80
10	Urinary System { Sequelæ of Gonorr.	2	—	—	—	—	—	·12
10	Urinary System { Other diseases	7	—	—	—	1	1	·23
11	Generative System	16	—	—	—	—	—	·70
12	Organs of Locomotion	9	—	—	—	2	1	·68
13	Cellular Tissue	34	—	—	—	—	—	1·17
14	Cutaneous System	62	—	—	—	—	—	2·57
	III.—*Debility*	31	—	—	—	1	—	1·83
	IV.—*Poisons*	12	1	—	1	—	—	·24
	V.—*Injuries.*							
1	General	—	1	—	1	—	—	—
2	Local	194	1	—	1	1	1	7·62
3	In action	—	—	—	—	—	—	—
	No appreciable disease	3	—	—	—	—	—	·09
	Cause unknown (refers to deaths only).	—	1	—	1	—	—	—
	General Total	956	11	2	13	23	11	47·79
	Average of 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	} ·4	—	—	—	·06
—	—	—	—	—					
14·5	1·39	—	—	1·53	} 38·2	1·99	—	—	2·36
48·4	—	—	—	1·14					
—	—	—	—	—	—	—	—	—	—
2·1	—	—	—	·09	1·8	—	—	—	·10
—	—	—	—	—	·2	·18	—	—	·01
—	—	—	—	—	2·5	—	—	—	·20
65·0	1·39	—	—	2·76	43·1	• 2·17	—	—	2·73
21·4	—	2·07	·69	1·45	24·1	—	·54	·54	1·33
47·0	—	—	—	3·09	28·3	—	—	—	2·54
6·9	—	—	—	·85	7·8	—	—	·36	·56
11·1	2·08	3·46	2·08	1·81	7·0	·91	3·08	2·90	1·53
—	—	—	—	—	·2	—	—	—	·02
·7	—	·69	—	·26	2·2	·18	·18	·18	·12
87·1	2·08	6·22	2·77	7·46	69·6	1·09	3·80	3·98	6·10
3·4	1·39	1·39	—	·24	11·4	·91	1·63	·54	·92
13·1	—	·69	·69	·62	11·1	—	·91	1·09	·82
6·9	—	·69	·69	·55	8·5	—	·36	·36	·51
2·1	—	·69	—	·13	—	—	—	—	
20·1	—	2·08	·69	1·60	12·0	·18	2·54	2·36	1·52
24·9	—	—	—	3·44	24·1	—	·18	—	2·78
—	—	—	—	—	·2	—	—	—	·02
36·7	·69	·69	·69	1·66	36·3	—	·91	·36	1·99
122·4	·69	—	—	2·79	140·8	·73	1·27	·91	4·40
23·5	—	—	—	1·24	24·7	—	—	—	1·50
1·4	—	—	—	·08	3·6	—	·36	—	·49
4·8	—	·69	·69	·16	8·3	—	·54	·36	·66
11·1	—	—	—	·48	8·3	—	·18	·18	·38
6·2	—	1·39	·69	·47	3·3	·18	·36	·54	·26
23·5	—	—	—	·81	27·2	—	·18	—	1·01
42·9	—	—	—	1·78	69·2	—	·73	·73	2·71
21·4	—	·69	—	1·27	16·3	—	1·45	2·72	1·30
8·3	·69	—	—	·17	10·2	·54	—	—	·47
—	·69	—	—	—	—	·91	—	—	—
134·2	·69	·69	·69	5·27	129·6	·18	·73	·73	5·12
—	—	—	—	—	—	—	—	—	—
2·1	—	—	—	·06	·4	—	—	—	·01
—	·69	—	—	—	—	·18	—	—	—
661·1	8·99	15·91	7·60	33·04	658·2	7·07	16·13	14·86	35·70
633·8	7·68	19·81	13·03	32·84	—	—	—	—	—

to 1882 will be given in the Report for 1883 those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT No. VII.—TABLE showing the AVERAGE STRENGTH, the ADMISSIONS into TROOPS stationed at WEST INDIES, during the year 1882, with the

Orders.	Average Strength, 492. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
	I.—*General Diseases.*							
	Febrile Group.							
	Eruptive Fevers { Small-pox	—	—	—	—	—	—	—
	Eruptive Fevers { Other	—	—	—	—	—	—	—
	Continued „ { Enteric	1	1	—	1	—	—	·23
	Continued „ { Other	11	—	—	—	—	—	·25
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	10	—	—	—	—	—	·52
	Cholera	—	—	—	—	—	—	—
	Other Diseases	—	—	—	—	—	—	—
	Total	22	1	—	1	—	—	1·00
	Constitutional Group.							
	Rheumatism	9	—	—	—	—	—	·64
	Primary Syphilis	30	—	—	—	—	—	1·96
	Secondary „	11	—	—	—	—	—	·55
	Tubercular Diseases	6	1	—	1	—	—	2·20
	Scurvy and Purpura	—	—	—	—	—	—	—
	Other Diseases	1	—	—	—	—	—	·02
	Total	57	1	—	1	—	—	5·37
	II.—*Local Diseases.*							
	Diseases of the—							
1	Nervous System	5	—	—	—	—	1	·28
2	Eye	8	—	—	—	—	—	·44
3	Ear	6	—	—	—	—	1	·11
4	Nose	—	—	—	—	—	—	—
5	Circulatory System	3	—	—	—	2	2	·78
6	Absorbent „	6	—	—	—	—	—	·65
7	Ductless Glands	—	—	—	—	—	—	—
8	Respiratory System	7	—	—	—	—	—	1·11
9	Digestive „	72	2	—	2	—	1	1·60
10	Urinary System { Gonorrhœa	21	—	—	—	—	—	1·39
10	Urinary System { Sequelæ of Gonorr.	9	—	—	—	—	—	·68
10	Urinary System { Other Diseases	4	—	—	—	—	—	·03
11	Generative System	7	—	—	—	—	—	·20
12	Organs of Locomotion	2	—	—	—	—	—	·06
13	Cellular Tissue	5	—	—	—	—	—	·16
14	Cutaneous System	24	—	—	—	—	—	·67
	III.—*Debility*	7	—	—	—	3	1	1·24
	IV.—*Poisons.*	3	1	—	1	—	—	·03
	V.—*Injuries.*							
1	General	—	—	—	—	—	—	—
2	Local	64	—	—	—	—	—	2·54
3	In action	—	—	—	—	—	—	—
	No appreciable disease	—	—	—	—	—	—	—
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General total	332	5	—	5	5	6	18·34
	Average for 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

HOSPITAL, DEATHS, NUMBERS INVALIDED, and CONSTANTLY SICK among the WHITE Ratios per 1,000 of the Strength, and the Average Ratios for 10 years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	0·3	—	—	—	·02
—	—	—	—	—					
2·0	2·03	—	—	·46	143·2	1·33	—	—	3·12
22·3	—	—	—	·51					
—	—	—	—	—	22·0	13·65	—	—	·57
20·3	—	—	—	1·06	60·9	4·33	1·33	—	2·72
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1·0	—	—	—	·02
44·7	2·03	—	—	2·03	227·4	19·31	1·33	—	6·45
18·3	—	—	—	1·30	36·6	—	1·33	1 00	2·16
61·0	—	—	—	3·98	27·6	—	—	—	1·11
22·3	—	—	—	1·12	7·3	—	·67	—	·47
12·2	2·03	—	—	4·47	7·3	·33	4·66	2·66	1·44
—	—	—	—	—	—	—	—	—	—
2·0	—	—	—	·04	·7	—	—	—	·03
115·8	2·03	—	—	10·91	79·5	·33	6·66	3·66	5·21
10·2	—	—	2·03	·57	16·3	·67	5·99	3·00	1·91
16·3	—	—	—	·90	8·3	—	1·66	1·00	·59
12·2	—	—	2·03	·22	11·3	—	1·00	1·33	·51
—	—	—	—	—	—	—	—	—	—
6·1	—	4·07	4·07	1·59	15·7	·33	3·00	2·66	1·42
12·2	—	—	—	1·32	18·0	—	—	—	1·37
—	—	—	—	—	—	—	—	—	—
14·2	—	—	—	2·26	27·3	1·00	·33	1·00	1·93
146·3	4·07	—	2·03	3·25	119·5	1·00	2·33	1·00	4·14
42·7	—	—	—	2·83	55·6	—	—	—	2·42
18·3	—	—	—	1·38	12·3	—	—	—	·74
8·1	—	—	—	·06	12·3	—	—	—	·28
14·2	—	—	—	·41	17·0	—	—	·67	·74
4·1	—	—	—	·12	11·3	—	1·33	·67	1·13
10·2	—	—	—	·33	19·7	—	—	—	·81
48·8	—	—	—	1·36	57·9	—	·67	·67	2·12
14·2	—	6·09	2·03	2·52	28·3	—	9·32	2·33	2·02
6·1	2·03	—	—	·06	7·8	·33	—	—	·22
—	—	—	—	—	·3	·67	·33	—	·13
180·1	—	—	—	5·16	115·9	1·33	·33	1·00	4·35
—	—	—	—	—	—	—	—	—	
—	—	—	—	—	0·3	—	—	—	
—	—	—	—	—	—	—	—	—	—
674·8	10·16	10·16	12·19	37·28	861·5	24·97	34·28	18·98	38·19
937·8	15·39	23·84	13·55	43·10	—	—	—	—	—

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT No. VIII.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into TROOPS stationed in the WEST INDIES, during the year 1882, with the

Orders.	Average Strength, 1,120. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.* *Febrile Group.*							
	Eruptive Fevers { Small-pox	—	—	—	—	—	—	—
	Eruptive Fevers { Other	1	—	—	—	—	—	·03
	Continued „ { Enteric	—	—	—	—	—	—	—
	Continued „ { Other	33	—	—	—	—	—	53
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	127	1	—	1	—	—	4·66
	Cholera	—	—	—	—	—	—	—
	Other diseases	1	—	—	—	—	—	·01
	Total	162	1	—	1	—	—	5·23
	Constitutional Group.							
	Rheumatism	85	—	—	—	—	6	3·92
	Primary Syphilis	167	—	—	—	—	—	8·50
	Secondary „	28	—	—	—	—	5	4·20
	Tubercular Diseases	19	8	—	8	—	4	2·73
	Scurvy and Purpura	—	—	—	—	—	—	—
	Other diseases	1	—	—	—	—	—	·17
	Total	300	8	—	8	—	15	19·52
	II. *Local Diseases.* Diseases of the—							
1	Nervous System	25	2	—	2	—	8	1·60
2	Eye	24	—	—	—	—	—	1·89
3	Ear	1	—	—	—	—	—	·38
4	Nose	—	—	—	—	—	—	—
5	Circulatory System	21	1	—	1	—	7	2·07
6	Absorbent „	34	—	—	—	—	—	2·83
7	Ductless Glands	—	—	—	—	—	—	—
8	Respiratory System	42	2	—	2	—	5	3·99
9	Digestive „	141	5	—	5	—	—	5·64
10	Urinary System { Gonorrhœa	149	—	—	—	—	—	9·70
10	Urinary System { Sequelæ of Gonorr.	17	—	—	—	—	—	1·85
10	Urinary System { Other diseases	10	—	—	—	—	—	·32
11	Generative System	17	—	—	—	—	1	·76
12	Organs of Locomotion	15	—	—	—	—	4	1·64
13	Cellular Tissue	22	—	—	—	—	—	·97
14	Cutaneous System	87	—	—	—	—	—	3·44
	III.—*Debility*	11	—	—	—	—	5	1·16
	IV.—*Poisons*	—	—	—	—	—	—	—
	V.—*Injuries.*							
1	General	—	—	—	—	—	—	—
2	Local	72	—	—	—	—	2	3·62
3	In action	—	—	—	—	—	—	—
	No appreciable disease	2	—	—	—	—	—	—
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General Total	1,152	19	—	19	—	47	66·61
	Average of 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given n future years. The average ratios for the four years 1879

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the BLACK Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000, from 1879 to 1881				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—					
·9	—	—	—	·03	·9	—	—	—	·09
—	—	—	—	—					
29·4	—	—	—	·47	79·4	—	—	—	3·03
—	—	—	—	—	·3	·31	—	—	
113·4	·89	—	—	4·16	190·6	1·87	—	·31	4·64
—	—	—	—	—	—	—	—	—	—
·9	—	—	—	·01	1·3	—	—	—	·03
144·6	·89	—	—	4·67	272·5	2·18	—	·31	7·79
75·9	—	—	5·36	3·50	72·6	—	—	3·11	3·37
149·1	—	—	—	7·59	114·9	—	—	—	8·49
25·0	—	—	4·46	3·75	30·8	·31	—	4·67	3·27
17·0	7·14	—	3·57	2·44	13·4	5·61	—	8·72	2·13
—	—	—	—	—	—	—	—	—	—
·9	—	—	—	·15	3·1	—	—	·62	·28
267·9	7·14	—	13·39	17·43	234·8	5·92	—	17·13	17·54
22·3	1·79	—	7·14	1·43	14·6	·31	—	3·11	1·39
21·4	—	—	—	1·69	17·4	—	—	·31	·70
·9	—	—	—	·34	2·5	—	—	—	·13
—	—	—	—	—	.3	—	—	—	.01
18·8	·89	—	6·25	1·85	15·9	3·11	—	4·98	1·24
30·4	—	—	—	2·53	23·4	—	—	—	1·56
—	—	—	—	—	—	—	—	—	—
37·5	1·79	—	4·46	3·56	64·8	·94	—	1·25	3·66
125·9	4·46	—	—	5·03	92·8	2·49	—	1·25	5·57
133·0	—	—	—	8·66	112·1	—	—	—	5·79
15·2	—	—	—	1·65	26·2	—	—	—	1·95
8·9	—	—	—	·29	5·6	·94	—	·62	·29
15·2	—	—	·89	·68	28·0	—	—	·62	1·91
13·4	—	—	3·57	1·46	10·3	—	—	1·25	·68
19·6	—	—	—	·87	23·0	—	—	·31	1·33
77·7	—	—	—	3·07	82·2	—	—	·62	3·35
9·8	—	—	4·46	1·03	17·1	·62	—	3·10	1·40
—	—	—	—	—	·3	—	—	—	·01
—	—	—	—	—	—	·62	—	—	—
64·3	—	—	1·79	3·23	91·0	·62	—	1·26	3·59
—	—	—	—	—	—	—	—	—	—
1·8	—	—	—	—	2·2	—	—	—	·14
—	—	—	—	—	—	—	—	—	—
1028·6	16·96	—	41·96	59·47	1137·0	17·75	—	41·11	60·03
1127·4	17·49	—	41·11	57·63	—	—	—	—	—

to 1883 will be given in the Report for 1879, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT No. IX.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into TROOPS stationed at WEST AFRICA during the year 1882, with the

Orders.	Average Strength, 580. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*							
	Febrile Group.							
	Eruptive Fevers { Small-pox	—	—	—	—	—	—	—
	Eruptive Fevers { Other	—	—	—	—	—	—	—
	Continued „ { Enteric	—	—	—	—	—	—	—
	Continued „ { Other	—	—	—	—	—	—	—
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	106	2	—	2	—	—	2·08
	Cholera	—	—	—	—	—	—	—
	Other Diseases	1	—	—	—	—	—	·03
	Total	107	2	—	2	—	—	2·11
	Constitutional Group.							
	Rheumatism	34	—	—	—	—	—	2·62
	Primary Syphilis	57	—	—	—	—	—	4·05
	Secondary „	6	—	—	—	—	—	1·29
	Tubercular diseases	11	8	—	8	—	—	2·98
	Scurvy and Purpura	—	—	—	—	—	—	—
	Other Diseases	2	—	—	—	—	—	·14
	Total	110	8	—	8	—	—	11·03
	II.—*Local Diseases.*							
	Diseases of the—							
1	Nervous System	29	—	—	—	—	—	1·99
2	Eye	20	—	—	—	—	1	1·89
3	Ear	3	—	—	—	—	—	·09
4	Nose	—	—	—	—	—	—	—
5	Circulatory System	11	1	—	1	—	—	1·46
6	Absorbent „	8	—	—	—	—	—	·83
7	Ductless glands	—	—	—	—	—	—	—
8	Respiratory System	44	3	—	3	—	—	2·19
9	Digestive „	81	2	—	2	—	—	2·92
10	Urinary System { Gonorrhœa	111	—	—	—	—	—	3·99
10	Urinary System { Sequelæ of Gonorr.	4	—	—	—	—	—	·21
10	Urinary System { Other diseases	5	—	—	—	—	—	·26
11	Generative System	13	—	—	—	—	—	·73
12	Organs of Locomotion	13	—	—	—	—	—	1·00
13	Cellular Tissue	29	—	—	—	—	—	·75
14	Cutaneous System	64	—	—	—	—	—	2·54
	III.—*Debility*	3	—	—	—	—	—	·09
	IV.—*Poisons*	1	—	—	—	—	—	·01
	V.—*Injuries.*							
1	General	—	—	—	—	—	—	—
2	Local	63	—	—	—	—	—	1·66
3	In action	—	—	—	—	—	—	—
	No appreciable disease	4	—	—	—	—	—	·05
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General total	723	16	—	16	—	1	35·29
	Average of 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years, 1879

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the BLACK Ratios per 1,000 of the Strength, and the Average Ratios for 10 years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	} 4·4	—	—	—	·22
—	—	—	—	—					
—	—	—	—	—	} 2·2	—	—	—	·09
—	—	—	—	—					—
—	—	—	—	—	·5	·55	—	—	—
182·8	3·45	—	—	3·59	552·4	3·29	—	—	18·60
—	—	—	—	—	—	—	—	—	—
1·7	—	—	—	·05	13·7	—	—	—	·66
184·5	3·45	—	—	3·64	573·2	3·84	—	—	19·57
58·6	—	—	—	4·52	72·4	—	—	1·65	3·32
98·3	—	—	—	6·98	116·9	—	—	—	6·67
10·3	—	—	—	2·22	54·3	—	—	6·03	2·79
19·0	13·79	—	—	5·05	28·5	7·18	—	3·84	1·76
—	—	—	—	—	—	—	—	—	—
3·4	—	—	—	·24	1·6	·55	—	—	·07
189·6	13·79	—	—	19·01	273·7	7·68	—	11·52	14·61
50·0	—	—	—	3·43	17·6	1·10	—	1·10	·62
34·5	—	—	1·72	3·26	21·4	—	—	2·19	·95
5·2	—	—	—	·16	7·1	—	—	—	·26
—	—	—	—	—	·5	—	—	—	—
19·0	1·72	—	—	2·52	28·5	1·10	—	5·48	2·07
13·8	—	—	—	·57	18·1	—	—	—	·85
—	—	—	—	—	—	—	—	—	—
75·9	5·17	—	—	3·77	74·6	·55	—	2·74	2·92
139·7	3·45	—	—	5·03	136·0	3·84	—	1·65	4·79
191·4	—	—	—	6·88	117·9	—	—	—	5·16
6·9	—	—	—	·36	21·4	—	—	—	1·10
8·6	—	—	—	·45	5·5	·55	—	—	·26
22·4	—	—	—	1·24	17·6	—	—	—	·61
22·4	—	—	—	1·72	17·6	—	—	—	1·29
50·0	—	—	—	1·29	31·3	—	—	—	1·11
110·3	—	—	—	4·38	113·6	—	—	—	4·82
5·2	—	—	—	·16	11·0	—	—	—	·31
1·7	—	—	—	·02	·5	—	—	—	·02
—	—	—	—	—	·5	·55	—	—	·02
108·6	—	—	—	2·86	110·3	—	—	1·10	3·20
—	—	—	—	—	—	—	—	—	—
6·9	—	—	—	·09	·5	—	—	—	·02
—	—	—	—	—	—	—	—	—	—
1246·6	27·58	—	1·72	60·84	1598·4	19·20	—	25·78	64·56
1658·9	25·01	—	25·78	63·46	—	—	—	—	—

to 1882, will be given in the Report for 1883, those for the five years, 1879 to 1883, in that for 1884, &c., &c.

ABSTRACT No. X.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into stationed at the CAPE OF GOOD HOPE and ST. HELENA during the year 1882,

Orders.	Average Strength, 3,944. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
	I. *General Diseases.*							
	Febrile Group.							
	Eruptive Fevers { Small-pox	2	—	—	—	—	—	·12
	Eruptive Fevers { Other	1	—	—	—	—	—	·19
	Continued „ { Enteric	240	47	—	47	4	—	54·14
	Continued „ { Other	368	—	—	—	—	—	21·84
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	23	—	—	—	2	1	1·52
	Cholera	—	—	—	—	—	—	—
	Other Diseases	1	—	—	—	—	—	·02
	Total	635	47	—	47	6	1	77·83
	Constitutional Group.							
	Rheumatism	113	—	—	—	11	2	6·89
	Primary Syphilis	195	—	—	—	—	—	16·63
	Secondary „	64	—	—	—	6	4	8·71
	Tubercular Diseases	9	—	1	1	7	4	1·83
	Scurvy and Purpura	1	—	—	—	—	—	·03
	Other Diseases	6	1	—	1	2	—	·58
	Total	387	1	1	2	26	10	34·67
	II. *Local Diseases.*							
1	Diseases of the—							
2	Nervous System	41	5	—	5	12	3	3·63
3	Eye	36	—	—	—	2	4	2·66
4	Ear	21	—	—	—	3	5	1·44
5	Nose	1	—	—	—	—	—	·05
6	Circulatory System	48	2	—	2	14	37	5·34
7	Absorbent „	50	—	—	—	—	—	3·97
8	Ductless Glands	1	—	—	—	—	1	·01
9	Respiratory System	110	2	—	2	6	7	6·85
10	Digestive „	464	8	2	10	15	15	26·64
	Urinary System { Gonorrhœa	170	—	—	—	—	—	14·68
	Urinary System { Sequelæ of Gonorr.	24	—	—	—	—	—	1·55
11	Urinary System { Other diseases	32	—	—	—	—	—	1·89
12	Generative System	26	—	—	—	—	1	2·09
13	Organs of Locomotion	24	—	—	—	5	—	2·42
14	Cellular Tissue	53	—	—	—	—	1	2·17
	Cutaneous System	166	—	—	—	1	2	7·96
	III. *Debility*	144	—	—	—	35	8	11·79
	IV. *Poisons*	11	1	—	1	—	—	·36
	V. *Injuries.*							
1	General	—	5	—	5	—	—	·09
2	Local	302	3	—	3	7	11	15·75
3	In action	—	—	—	—	1	18	·19
	No appreciable disease	3	—	—	—	—	—	·11
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General total	2,749	74	3	77	133	124	224·14
	Average of 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879 to

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS with the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
·5	—	—	—	·03	} ·7	—	·03	—	·12
·3	—	—	—	·05					
60·9	11·92	1·01	—	13·73	} 148·6	10·92	10·09	—	8·46
93·3	—	—	—	5·54					
—	—	—	—	—	—	—	—	—	—
5·8	—	·51	·25	·38	58·3	·97	5·22	·07	2·67
—	—	—	—	—	—	—	—	—	—
·2	—	—	—	·00	3·0	·14	·10	—	·20
161·0	11·92	1·52	·25	19·73	210·6	12·03	15·44	·07	11·45
28·4	—	2·79	·51	1·74	48·3	—	7·06	1·53	3·03
49·4	—	—	—	4·22	35·2	—	—	—	3·17
16·2	—	1·52	1·01	2·21	19·7	·03	1·46	·31	1·44
2·3	·25	1·77	1·01	·46	3·6	·80	1·57	1·43	·28
·3	—	—	—	·01	1·2	—	·10	—	·06
1·5	·25	·51	—	·15	2·3	·21	·49	·17	·20
98·1	·51	6·59	2·54	8·79	110·3	1·04	10·68	3·44	8·18
10·4	1·27	3·04	·76	·92	11·7	·63	3·10	·97	·90
9·1	—	·51	1·01	·68	11·5	—	1·18	·90	·72
5·3	—	·76	1·27	·37	4·3	—	·59	·38	·29
·2	—	—	—	·01	·2	·03	—	—	·01
12·2	·51	3·55	9·38	1·35	19·5	·73	8·90	4·07	1·66
12·7	—	—	—	1·01	10·4	—	·28	·14	·83
·2	—	—	·25	·00	—	—	—	—	—
27·9	·51	1·52	1·77	1·74	34·9	1·29	2·30	·90	2·39
117·7	2·53	3·80	3·80	6·76	186·4	4·56	12·83	2·51	10·72
43·1	—	—	—	3·72	20·9	—	—	—	1·59
6·1	—	—	—	·39	6·3	—	·31	·10	·44
8·1	—	—	—	·48	3·9	·14	·77	·35	·21
6·6	—	—	·25	·53	7·7	—	·52	·28	·50
6·1	—	1·27	—	·61	5·6	·14	1·25	·94	·42
13·4	—	—	·25	·55	18·2	—	·38	·17	1·01
42·1	—	·25	·51	2·02	54·3	—	·63	·14	3·09
36·5	—	8·87	2·03	2·99	37·4	·17	13·36	2·71	2·47
2·8	·25	—	—	·09	3·1	·63	—	—	·17
—	1·27	—	—	·02	·5	1·67	—	—	·02
76·6	·76	1·77	2·79	3·99	76·9	·49	2·26	1·50	3·83
—	—	·25	4·56	·05	24·8	39·72	10·50	6·96	2·21
·8	—	—	—	·03	·9	—	—	—	·04
—	—	—	—	—	—	—	—	—	—
697·0	19·52	33·72	31·44	56·83	860·3	63·27	85·28	26·53	53·15
865·0	40·74	56·44	19·68	49·25	—	—	—	—	—

1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for the year 1884, &c., &c.

ABSTRACT No. XI.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into stationed at MAURITIUS during the Year 1882, with the Ratios per

Orders.	Average Strength, 382. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.* *Febrile Group.*							
	Eruptive Fevers { Small-pox	—	—	—	—	—	—	—
	Eruptive Fevers { Other	1	—	—	—	—	—	·09
	Continued „ { Enteric	—	—	—	—	—	—	—
	Continued „ { Other	21	—	—	—	—	—	·43
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	554	3	—	3	3	—	16·00
	Cholera	—	—	—	—	—	—	—
	Other Diseases	—	—	—	—	—	—	—
	Total	576	3	—	3	3	—	16·52
	Constitutional Group.							
	Rheumatism	5	—	—	—	—	2	·20
	Primary Syphilis	51	—	—	—	—	—	4·26
	Secondary „	34	—	—	—	—	—	2·60
	Tubercular diseases	2	—	—	—	—	—	·22
	Scurvy and Purpura	2	—	—	—	—	—	·19
	Other Diseases	4	—	—	—	—	—	·10
	Total	98	—	—	—	—	2	7·57
	II.—*Local Diseases.* Diseases of the—							
1	Nervous System	1	—	—	—	—	—	·04
2	Eye	3	—	—	—	—	—	·16
3	Ear	7	—	—	—	—	—	·17
4	Nose	—	—	—	—	—	—	—
5	Circulatory System	6	—	—	—	1	1	·82
6	Absorbent „	22	—	—	—	—	—	1·90
7	Ductless Glands	—	—	—	—	—	—	—
8	Respiratory System	9	—	—	—	—	—	·32
9	Digestive „	84	2	-	2	—	1	2·51
10	Urinary System { Gonorrhœa	31	—	—	—	—	—	1·87
10	Urinary System { Sequelæ of Gonorr.	3	—	—	—	1	—	·80
10	Urinary System { Other diseases	6	—	—	—	—	—	·29
11	Generative System	—	—	—	—	—	—	—
12	Organs of Locomotion	3	—	—	—	—	—	·14
13	Cellular Tissue	10	—	-	—	—	—	·23
14	Cutaneous System	32	—	—	—	—	—	1·11
	III.—*Debility*	14	—	—	—	4	2	·71
	IV.—*Poisons*	2	—	—	—	—	—	·04
	V.—*Injuries.*							
1	General	—	—	—	—	—	—	—
2	Local	39	—	—	—	—	—	1·16
3	In action	—	—	—	—	—	—	—
	No appreciable disease	—	—	—	—	—	—	—
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General Total	946	5	—	5	9	6	36·36
	Average of 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879 to

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 for 1879–80.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	} —	—	—	—	—
2·6	—	—	—	·24					
—	—	—	—	—	} 86·7	·94	—	—	2·79
55·0	—	—	—	1·12					
—	—	—	—	—	—	—	—	—	—
1450·3	7·85	7·85	—	41·89	1165·0	2·83	32·99	—	32·21
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1507·9	7·85	7·85	—	43·25	1251·7	3·77	32·99	—	35·00
13·1	—	—	5·23	·52	36·8	—	·94	·94	2·59
133·5	—	—	—	11·15	143·3	—	—	—	8·85
89·0	—	—	—	6·81	68·8	—	2·83	—	4·09
5·2	—	—	—	·58	6·6	·94	3·77	2·83	1·24
5·2	—	—	—	·50	·9	—	—	—	.02
10·5	—	—	—	·26	2·8	—	1·89	·94	·37
256·5	—	—	5·23	19·82	259·2	·94	9·43	4·71	17·16
2·6	—	—	—	·10	10·4	—	4·71	·94	1·26
7·8	—	—	—	·42	11·3	—	—	·94	·73
18·3	—	—	—	·44	17·9	—	—	·94	1·19
—	—	—	—	—	—	—	—	—	—
15·7	—	2·62	2·62	2·15	45·2	1·89	8·48	8·48	3·21
57·6	—	—	—	4·97	50·9	—	—	—	4·76
—	—	—	—	—	—	—	—	—	—
23·6	—	—	—	·84	61·3	—	·94	1·89	2·97
219·9	5·23	—	2·62	6·57	227·1	5·66	2·83	1·89	6·97
81·2	—	—	—	4·89	107·4	—	—	—	5·47
7·8	—	2·62	—	2·09	24·5	—	—	·94	1·73
15·7	—	—	—	·76	21·7	·94	0·94	—	1·87
—	—	—	—	—	10·4	—	—	—	·96
7·8	—	—	—	·37	2·8	—	·94	·94	·30
26·2	—	—	—	·60	33·0	—	—	—	1·02
83·8	—	—	—	2·91	98·0	—	—	—	3·04
36·7	—	10·47	5·23	1·86	60·3	—	11·31	4·71	2·92
5·2	—	—	—	·10	7·5	·94	—	—	·18
—	—	—	—	—	—	—	—	—	—
102·1	—	—	—	3·04	169·7	·94	1·89	—	5·04
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	0·9	—	—	—	·01
—	—	—	—	—	—	—	—	—	—
2476·4	13·08	23·56	15·70	95·18	2471·2	15·08	74·46	26·39	95·79
1962·1	17·12	42·06	15·16	61·14	—	—	—	—	—

1882 will be given in the Report for 1883, those for the five years 1879 to 83 in that for 1884, &c., &c.

ABSTRACT No. XII.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into TROOPS stationed at CEYLON during the Year 1882, with the Ratios

Orders.	Average Strength, 990. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*							
	Febrile Group.							
	Eruptive Fevers { Small-pox	—	—	—	—	—	—	—
	Eruptive Fevers { Other	—	—	—	—	—	—	—
	Continued „ { Enteric	1	1	—	1	—	—	·13
	Continued „ { Other	74	—	—	—	—	—	2·40
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	5	—	—	—	—	—	·31
	Cholera	—	—	—	—	—	—	—
	Other Diseases	2	—	—	—	—	—	·03
	Total	82	1	—	1	—	—	2·87
	Constitutional Group.							
	Rheumatism	34	—	—	—	3	2	1.96
	Primary Syphilis	122	—	—	—	—	—	7·60
	Secondary „	40	—	—	—	6	1	3·16
	Tubercular diseases	3	—	—	—	—	3	·42
	Scurvy and Purpura	—	—	—	—	—	—	—
	Other Diseases	—	—	—	—	—	—	—
	Total	199	—	—	—	9	6	13·14
	II.—*Local Diseases.*							
	Diseases of the—							
1	Nervous System	25	—	—	—	4	1	3·65
2	Eye	19	—	—	—	—	—	·43
3	Ear	16	—	—	—	1	—	·44
4	Nose	1	—	—	—	—	—	·21
5	Circulatory System	20	2	—	2	9	4	1·84
6	Absorbent „	47	—	—	—	—	—	4·94
7	Ductless Glands	—	—	—	—	—	—	—
8	Respiratory System	16	—	—	—	—	1	·58
9	Digestive „	281	4	—	4	29	4	13·51
10	Urinary System { Gonorrhœa	79	—	—	—	—	—	5·76
10	Urinary System { Sequelæ of Gonorr.	14	—	—	—	—	—	1·14
10	Urinary System { Other diseases	16	—	—	—	—	—	·67
11	Generative System	30	—	—	—	—	—	1·30
12	Organs of Locomotion	6	—	—	—	—	—	·31
13	Cellular Tissue	31	—	—	—	—	—	1·19
14	Cutaneous System	90	—	—	—	—	—	2·78
	III.—*Debility*	31	—	—	—	4	2	1·86
	IV.—*Poisons*	21	—	—	—	—	—	·39
	V.—*Injuries.*							
1	General	—	1	—	1	—	—	—
2	Local	158	—	—	—	—	—	5·27
3	In action	—	—	—	—	—	—	—
	No appreciable disease	3	—	—	—	—	—	·07
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General Total	1,185	8	—	8	56	18	62·35
	Average of 10 years, 1872-81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the WHITE per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	1·4	—	—	—	·02
—	—	—	—	—					
1·0	1·01	—	—	·18	98·0	2·11	—	—	3·12
74·8	—	—	—	2·43					
—	—	—	—	—	—	—	—	—	—
5·0	—	—	—	·81	13·7	·35	—	—	·55
—	—	—	—	—	·4	—	—	—	—
2·0	—	—	—	·03	6·0	—	—	—	·20
82·8	1·01	—	—	2·90	119·5	2·46	—	—	3·89
34·4	—	3·03	2·02	1·98	23·2	—	·70	·35	1·00
123·2	—	—	—	7·68	159·5	—	·35	—	9·76
40·4	—	6·06	1·01	3·19	29·5	—	·70	·35	2·35
3·0	—	—	3·03	·42	17·9	3·87	7·73	4·22	1·97
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1·4	—	—	—	·08
201·0	—	9·09	6·06	13·27	231·5	3·87	9·49	4·92	15·16
25·3	—	4·04	1·01	3·69	15·5	·35	6·32	·35	3·31
19·2	—	—	—	·43	18·3	—	1·05	·70	1·29
16·2	—	1·01	—	·45	10·5	—	—	—	·26
1·0	—	—	—	·21	1·0	—	—	—	·04
20·2	2·02	9·09	4·04	1·86	11·9	·35	1·41	1·05	·73
47·5	—	—	—	4·99	67·1	—	·70	—	6·30
—	—	—	—	—	—	—	—	—	—
16·2	—	—	1·01	·59	28·5	1·05	2·11	1·41	1·87
283·8	4·04	29·29	4·04	13·65	284·6	9·14	15·81	2·46	13·43
79·8	—	—	—	5·82	99·4	—	—	—	4·98
14·1	—	—	—	1·15	16·2	—	—	—	·88
16·2	—	—	—	·68	14·4	—	—	—	·48
30·3	—	—	—	1·31	16·2	—	·35	·35	·73
6·1	—	—	—	·31	3·9	—	1·41	1·05	·53
31·3	—	—	—	1·20	33·7	—	·35	·35	·96
90·9	—	—	—	2·81	114·9	—	·35	1·05	3·95
31·3	—	4·04	2·02	1·88	19·0	—	2·46	2·81	1·15
21·2	—	—	—	·39	11·6	·70	—	—	·22
—	1·01	—	—	—	·4	2·11	·35	·35	·05
159·6	—	—	—	5·32	151·4	·35	·70	1·41	4·74
—	—	—	—	—	—	—	—	—	—
3·0	—	—	—	·07	1·4	—	—	—	·02
—	—	—	—	—	—	—	—	—	—
1197·0	8·08	56·56	18·18	62·98	1270·9	20·38	42·87	18·27	64·97
992·6	15·67	33·45	14·38	51·92	—	—	—	—	—

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT No. XIII.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into TROOPS stationed in CHINA and the STRAITS SETTLEMENTS, during the Year 1882

Orders.	Average Strength, 1,663. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
	I. *General Diseases.*							
	Febrile Group.							
	Eruptive Fevers { Small-pox	—	—	—	—	—	—	—
	Eruptive Fevers { Other	1	—	—	—	—	—	.04
	Continued { Enteric	3	1	—	1	1	—	·32
	Continued { Other	316	1	—	1	3	—	8·55
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	102	—	—	—	2	—	2·48
	Cholera	—	—	—	—	—	—	—
	Other Diseases	1	—	—	—	—	—	·02
	Total	423	2	—	2	6	—	11·41
	Constitutional Group.							
	Rheumatism	25	—	—	—	—	1	·99
	Primary Syphilis	79	—	—	—	—	—	7·15
	Secondary „	27	1	—	1	—	—	3·04
	Tubercular diseases	9	1	—	1	7	8	2·02
	Scurvy and Purpura	1	—	—	—	—	—	·01
	Other Diseases	12	—	—	—	2	—	·88
	Total	153	2	—	2	9	9	14·09
	II.—*Local Diseases.*							
	Diseases of the—							
1	Nervous System	29	3	—	3	8	3	2·31
2	Eye	19	—	—	—	2	1	1·23
3	Ear	16	—	—	—	1	—	·30
4	Nose	2	—	—	—	1	—	·08
5	Circulatory System	33	1	—	1	9	8	3·40
6	Absorbent „	43	—	—	—	—	—	6·28
7	Ductless Glands	—	—	—	—	—	—	—
8	Respiratory System	45	1	—	1	4	3	3·26
9	Digestive „	233	—	—	—	16	3	11·74
10	Urinary System { Gonorrhœa	120	—	—	—	—	—	7·25
10	Urinary System { Sequelæ of Gonorr.	19	—	—	—	—	—	1·19
10	Urinary System { Other diseases	17	—	—	—	3	2	1·68
11	Generative system	36	—	—	—	1	1	1·59
12	Organs of Locomotion	13	1	—	1	2	2	·85
13	Cellular Tissue	23	—	—	—	—	—	·58
14	Cutaneous System	102	—	—	—	1	1	4·03
	III.—*Debility*	53	—	—	—	22	1	4·81
	IV.—*Poisons*	7	—	—	—	—	—	·22
	V.—*Injuries.*							
1	General	—	—	—	—	—	—	—
2	Local	196	—	—	—	2	—	7·43
3	In action	—	—	—	—	—	—	—
	No appreciable disease	3	—	—	—	—	—	·04
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General total	1,585	10	—	10	87	34	83·77
	Average of 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879 to 1882

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the WHITE with the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	} 3·1	—	—	—	·17
·6	—	—	—	·02					
1·8	·60	·60	—	·19	} 119·2	·73	—	—	2·86
190·0	·60	1·80	—	5·14					
—	—	—	—	—	—	—	—	—	—
61·3	—	1·20	—	1·49	65·5	·18	·55	—	2·30
—	—	—	—	—	—	—	—	—	—
·6	—	—	—	·01	2·8	·37	—	—	·10
254·3	1·20	3·61	—	6·86	190·6	1·28	·55	—	5·43
15·0	—	—	·60	·59	18·0	—	—	—	1·06
47·5	—	—	—	4·30	65·3	—	—	—	5·61
16·3	0·60	—	—	1·83	10·4	—	·37	·92	1·12
5·4	0·60	4·21	4·81	1·21	19·1	1·47	11·19	4·40	2·76
·6	—	—	—	·01	—	—	—	—	—
7·2	—	1·20	—	·53	·9	·37	·37	—	·04
92·0	1·20	5·41	5·41	8·47	113·7	1·83	11·92	5·32	10·59
17·4	1·81	4·81	1·81	1·39	16·5	1·65	2·94	—	1·63
11·4	—	1·20	·60	·74	16·1	—	1·28	·92	1·04
9·6	—	·60	—	·18	11·9	—	·92	·37	·78
1·2	—	·60	—	·05	·2	—	—	—	—
19·9	·60	5·41	4·81	2·04	23·7	·92	4·95	2·75	1·83
25·9	—	—	—	3·78	30·6	—	—	—	3·05
—	—	—	—	—	—	—	—	—	—
27·1	0·60	2·41	1·81	1·96	47·3	—	1·65	—	2·53
140·1	—	9·62	1·81	7·06	164·3	1·65	4·59	·73	7·02
72·2	—	—	—	4·36	95·9	—	—	—	5·80
11·4	—	—	—	·72	17·6	—	—	—	1·11
10·2	—	1·81	1·20	1·01	7·5	·18	·92	—	·69
21·7	—	·60	·60	·96	16·3	—	—	—	·76
7·8	·60	1·20	1·20	·51	3·1	—	·73	·37	·46
13·8	—	—	—	·35	19·1	—	—	—	·97
61·3	—	·60	·60	2·42	65·3	—	·55	—	2·49
31·9	—	13·23	·60	2·89	29·4	—	6·42	1·83	1·71
4·2	—	—	—	·13	8·3	·37	—	—	·31
—	—	—	—	—	·4	·18	—	—	·02
117·9	—	1·20	—	4·47	113·4	·18	·55	·73	3·71
—	—	—	—	—	—	—	—	—	—
1·8	—	—	—	·02	3·3	—	—	—	·06
—	—	—	—	—	—	—	—	—	—
953·1	6·01	52·31	20·45	50·37	994·5	8·25	37·97	13·02	51·99
1146·2	12·91	40·96	16·19	48·72	—	—	—	—	—

will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT No. XIV.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into stationed in BENGAL during the Year 1882, with the Ratios per

Orders.	Average Strength, 86,330. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
	I.—*General Diseases.*							
	Febrile Group.							
	Eruptive Fevers { Small Pox	38	4	—	4	—	—	2·15
	Eruptive Fevers { Other	26	—	—	—	—	—	1·15
	Continued „ { Enteric	268	103	—	103	4	—	35·34
	Continued „ { Other	3,971	2	—	2	2	—	129·77
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	19,467	28	1	29	35	3	532·09
	Cholera	73	45	—	45	—	—	1·76
	Other diseases	181	4	—	4	—	1	8·59
	Total of Febrile group	24,024	186	1	187	41	4	710·85
	Constitutional Group.							
	Rheumatism	1,309	—	—	—	54	18	75·82
	Primary Syphilis	3,139	—	—	—	1	—	231·66
	Secondary „	791	1	—	1	45	14	78·63
	Tubercular Diseases	263	24	12	36	105	55	36·28
	Scurvy and Purpura	24	1	—	1	1	—	1·37
	Other diseases	153	1	1	2	14	8	7·60
	Total of Constitutional group	5,679	27	13	40	220	95	431·36
	II.—*Local Diseases.*							
	Diseases of the—							
1	Nervous System	643	40	2	42	115	27	59·37
2	Eye	549	—	—	—	24	17	32·71
3	Ear	458	—	—	—	19	16	21·53
4	Nose	18	—	—	—	1	—	·83
5	Circulatory System	605	17	1	18	172	105	50·00
6	Absorbent „	683	—	—	—	3	2	66·61
7	Ductless Glands	19	—	—	—	—	—	1·14
8	Respiratory System	1,903	30	3	33	50	45	93·73
9	Digestive „	7,875	95	12	107	244	73	340·05
10	Urinary System { Gonorrhœa	4,041	—	—	—	—	—	265·19
10	Urinary System { Sequelæ of Gonorr.	612	1	—	1	8	—	42·09
10	Urinary System { Other diseases	297	7	1	8	13	6	14·06
11	Generative System	390	1	—	1	3	1	21·19
12	Organs of Locomotion	181	1	—	1	21	13	16·89
13	Cellular Tissue	653	—	—	—	—	3	26·98
14	Cutaneous System	2,631	—	—	—	7	7	111·06
	III.—*Debility*	1,116	1	1	2	308	62	69·73
	IV.—*Poisons*	179	4	—	4	—	—	6·73
	V.—*Injuries.*							
1	General	10	17	—	17	2	1	·97
2	Local	3,900	45	—	45	28	23	152·31
3	In action	—	—	—	—	—	1	—
	No appreciable disease	47	—	—	—	—	—	1·69
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General Total	56,513	472	34	506	1,279	501	2,537·06
	Average of 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios years 1879 to 1883 in that for

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.†
1·0	·11	—	—	·06	3·3	·04	—	—	·23
·7	—	—	—	·03					
7·4	2·83	·11	—	·96	169·2	3·46	·16	—	5·66
109·3	·06	·06	—	3·57					
—	—	—	—	—	—	—	—	—	—
535·8	·80	·96	·08	14·65	673·3	1·87	2·97	·08	4·92
2·0	1·24	—	—	·05	6·6	5·16	·04	—	·10
5·0	·11	—	·03	·24	4·0	·12	—	·01	·27
661·2	5·15	1·13	·11	19·56	856·4	10·65	3·17	·09	21·18
36·0	—	1·48	·49	2·09	37·9	·03	1·55	·97	1·81
86·4	—	·03	—	6·38	89·3	—	·06	—	6·32
21·8	·03	1·24	·39	2·16	24·9	·04	·94	·65	1·49
7·2	·99	2·89	1·51	1·00	7·0	1·68	1·83	1·77	·98
·7	·03	·03	—	·04	·6	—	—	—	·05
4·2	·06	·39	·22	·21	2·8	·16	·62	·16	·34
156·3	1·10	6·06	2·61	11·88	162·5	1·92	5·00	3·55	10·99
17·7	1·16	3·16	·74	1·63	20·6	3·18	2·82	·88	1·05
15·1	—	·66	·46	·90	15·6	—	·53	·69	·91
12·6	—	·52	·44	·59	10·6	—	·48	·54	·55
·5	—	·03	—	·02	·6	·01	·02	·02	·02
16·7	·49	4·73	2·89	1·38	16·3	·74	3·76	3·13	1·23
18·8	—	·08	·06	1·83	19·5	—	·06	·06	1·52
·5	—	—	—	·03	·4	·01	·01	·01	·05
52·4	·91	1·38	1·24	2·58	57·0	1·95	1·06	·84	2·96
216·8	2·94	6·72	2·01	9·37	249·0	5·24	6·59	2·70	9·01
111·2	—	—	—	7·30	111·8	—	—	—	5·78
16·8	·03	·22	—	1·16	14·8	—	·16	·11	·93
8·2	·22	·36	·17	·39	11·3	·24	·40	·18	·65
10·7	·03	·08	·03	·58	13·5	·01	·09	·12	·69
5·0	·03	·58	·36	·46	5·2	·09	·64	·52	·47
18·0	—	—	·08	·74	16·9	·01	·10	·03	·94
72·4	—	·19	·19	3·06	76·5	—	·38	·29	3·33
30·7	·06	8·48	1·71	1·92	38·5	·14	9·18	5·60	1·92
4·9	·11	—	—	·18	3·8	·44	—	—	·18
·3	·46	·06	·03	·03	·4	·60	—	·01	
107·4	1·24	·77	·63	4·19	92·1	·93	·82	·56	3·63
—	—	—	·03	—	—	·01	·18	·01	
1·3	—	—	—	·05	1·4	—	·01	—	·05
—	—	—	—	—	—	—	—	—	—
1555·5	13·93	35·21	13·79	69·83	1794·7	26·17	35·46	19·94	68·04
1511·3	20·59	38·10	15·38	60·95	—	—	—	—	—

for the four years 1879 to 1882 will be given in the Report for 1883, those for the five 1884, &c., &c. † For one year only.

ABSTRACT No. XV.—TABLE, taken from the REPORTS of the PRINCIPAL MEDICAL OFFICER, showing the ADMISSIONS and DEATHS which took place at the CHIEF STATIONS in the BENGAL COMMAND during the year 1882.

Divisions.	Stations.	Average Annual Strength.	Admitted into Hospital.	Died in India.	Ratio per 1,000 of Strength.		Ratio per 1,000 of Strength, 1872 to 1881.	
					Admissions.	Deaths.	Admissions.	Deaths.
PRESIDENCY	Fort William	964	1,089	13	1129·7	13·49	1106·8	9·21
	Dum-Dum	680	874	6	1285·3	8·82	1264·1	15·33
	Barrackpore	240	295	2	1229·2	8·33	2088·1	18·07
	Darjeeling	243	203	3	835·4	12·35	1205·0	19·57
ALLAHABAD	Allahabad	887	1,701	15	1917·7	16·91	1579·7	22·77
	Fort Allahabad	207	288	5	1391·3	24·15	1793·0	*26·86
	Cawnpore	970	1,534	20	1581·4	20·61	1557·6	20·54
	Dinapore	919	1,593	11	1733·4	11·97	1537·5	15·97
	Benares	397	649	16	1634·8	40·30	1645·5	21·48
	Chunar	73	178	6	2438·4	82·19	2466·5	32·12
SAUGOR	Jubbulpore	677	947	5	1398·8	7·39	1181·6	9·67
	Saugor	310	571	2	1841·9	6·45	1509·5	15·20
	Nowgong	282	493	3	1748·2	10·64	1581·3	20·83
	Pachmari	103	165	—	1601·9	—	1606·8	9·74
GWALIOR	Morar	923	2,534	17	2745·4	18·42	1425·4	21·29
	Fortress Gwalior	438	719	7	1641·6	15·98	1238·1	21·04
	Jhansi	286	548	3	1916·1	10·49	2031·1	9·01
OUDH	Lucknow	2,239	3,232	27	1443·5	12·06	1392·9	19·37
	Military Prison	49	70	5	1428·6	102·04	Cannot be given.	
	Sitapur	843	600	23	1749·3	67·06	1271·9	15·64
	Fyzabad	809	1,731	31	2139·7	38·32	1419·9	23·72
ROHILCUND	Bareilly	813	1,054	4	1296·4	4·92	1193·4	11·28
	Moradabad	200	300	2	1950·0	10·00	1258·0	16·55
	Shahjehanpur	365	364	5	997·3	13·70	1047·7	14·66
	Ranikhet	876	926	10	1057·1	11·42	895·2	11·57
	Choubuttia	372	431	1	1158·6	2·69	1130·2	†6·90
	Naini Tal	247	285	2	1153·8	8·10	1463·5	17·09
MEERUT	Meerut	1,559	2,076	21	1331·6	13·47	1741·0	22·88
	Fatehgarh	255	537	4	2105·9	15·69	1468·2	14·03
	Agra	1,089	1,669	6	1532·6	5·51	1420·9	15·72
	Muttra	390	602	1	1543·6	2·56	1343·9	22·88
	Delhi	467	1,541	4	3299·8	8·57	2517·0	23·61
	Roorkee	397	672	2	1692·7	5·04	1136·3	18·73
	Chakrata	759	453	2	596·8	2·64	774·2	8·12
	Laudour	166	214	1	1289·2	6·02	1608·3	19·01
SIRHIND	Umballa	1,762	1,739	17	986·9	9·65	1553·0	14·31
	Jullundur	770	807	2	1048·1	2·60	1545·8	21·99
	Subathu	216	258	1	1194·4	4·63	1020·8	15·76
	Dagshai	688	611	8	888·1	11·63	1050·3	13·23
	Jutogh	211	210	1	995·3	4·74	911·2	14·81
	Solon	212	249	3	1132·1	14·15	1164·2	‡14·86
	Kasauli	375	597	5	1592·0	13·33	1869·4	29·95
LAHORE	Meean Meer	868	2,796	11	3221·2	12·67	2305·6	42·85
	Fort Lahore	121	449	5	3710·7	41·32	2216·1	§41·07
	Ferozepore	1,036	1,436	9	1386·1	8·69	1546·4	15·59
	Mooltan	788	1,652	13	2096·4	16·50	1636·0	12·42
	Amritsar	247	791	2	3202·4	8·10	2345·5	17·13
	Bhagsu	55	94	—	1709·1	—	1095·6	‖12·39
	Dalhousie	318	456	1	1434·0	3·1	1606·3	8·26

* 4 years (1878-81). † 3 years (1879-81). ‡ 8 years (1874-81).
§ 9 years (1873-81). ‖ 8 years (1872-79, and 1881).

Divisions.	Stations.	Average Annual Strength.	Admitted into Hospital.	Died in India.	Ratio per 1,000 of Strength.		Ratio per 1,000 of Strength, 1872 to 1881.	
					Admissions.	Deaths.	Admissions.	Deaths.
Rawal Pindi	Rawal Pindi	1,679	2,834	15	1687·9	8·93	1524·2	15·39
	Fort Attock	145	534	4	3682·8	27·59	2200·4	24·79
	Sialkot	827	1,232	15	1498·2	18·14	1572·1	20·76
	Campbellpore	35	46	—	1285·7	—	1458·1	16·09
	Khysa Gully	39	36	—	923·1	—	1404·3	*29·26
	Barra Gully	62	56	—	903·2	—	1527·4	† 9·68
	Chungla Gully	70	98	1	1400·0	14·29	1277·0	‡ 8·75
	Kalabagh	55	89	1	1618·2	18·18	1758·2	§ 8·51
	Kooldunnah	174	256	1	1471·3	5·75	1119·2	§19·31
	Camp Gharial	193	168	—	870·5	—	804·0	‖21·36
	Ghora Dhaka	26	33	—	1269·2	—	928·6	¶ —
	Jhobba	19	8	—	421·1	—	—	—
	Murree	255	178	5	698·0	19·61	2340·7	33·44
Peshawar	Peshawar	1,552	3,681	26	2371·8	16·75	2596·7	24·57
	Nowshera	654	1,143	10	1747·7	15·29	1981·5	20·97
	Cherat	490	320	9	744·2	20·93	1344·7	**15·81
Punjab Frontier	Dera Ismail Khan	89	379	3	4258·4	33·71	2554·1	19·86
	Quetta	875	1,103	9	1260·6	10·29	920·8	¶36·75
	Gulistan	64	57	—	890·6	—	—	—
	Troops marching	1,426	892	10	625·5	7·01	975·3	16·07

* 9 years (1873–81). † 8 years (1873–79, and 1881). ‡ 7 years (1873–78 and 1881).
§ 8 years (1873–79 and 1881). ‖ 6 years (1874–78 and 1881).
¶ 1 year (1881). ** 1872–78 and 1880–81).

ABSTRACT No. XVI.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL of DISEASES in each of the MILITARY DIVISIONS in the BENGAL

Order.	Military Divisions.	Presidency.		Allahabad.		Saugor.		Gwalior.		Oudh.	
	Average Strength.	2,127		3,453		1,373		1,647		3,440	
	Diseases	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
	I. *General Diseases.*										
	Febrile Group.										
	Eruptive Fevers	—	—	5	1	—	—	3	—	19	1
	Continued „	157	3	1,073	21	300	2	58	7	533	33
	Yellow Fever	—	—	—	—	—	—	—	—	—	—
	Paroxysmal Fevers	529	1	1,099	8	627	—	2,303	1	884	1
	Cholera	4	1	17	10	1	—	1	1	44	30
	Other Diseases	4	—	8	—	1	—	10	1	10	—
	Total	694	5	2,202	40	929	2	2,375	10	1,490	64
	Constitutional Group.										
	Rheumatism	53	—	153	—	35	—	74	—	142	—
	Primary Syphilis	122	—	250	—	187	—	70	—	445	—
	Secondary „	25	—	76	—	36	—	26	—	78	—
	Tubercular Diseases	14	4	31	1	6	—	8	—	40	3
	Scurvy and Purpura	—	—	2	1	—	—	—	—	1	—
	Other diseases	7	—	91	—	6	—	1	—	6	—
	Total	231	4	603	2	270	—	179	—	713	3
	II. *Local Diseases.*										
	Diseases of the—										
1	Nervous System	29	1	111	7	16	2	41	2	81	3
2	Eye	22	—	54	—	20	—	32	—	67	—
3	Ear	30	—	42	—	17	—	33	—	100	—
4	Nose	1	—	2	—	2	—	—	—	3	—
5	Circulatory System	25	1	53	—	12	—	55	2	69	—
6	Absorbent „	29	—	137	—	18	—	25	—	88	—
7	Ductless Glands	1	—	—	—	—	—	—	—	—	—
8	Respiratory System	99	2	221	1	33	1	87	1	181	1
9	Digestive „	525	9	1,077	16	230	1	393	5	1,084	9
10	Urinary System. Gonorrhœa	229	—	403	—	250	—	169	—	479	—
	Urinary System. Sequelæ of Gonorrhœa	35	—	75	—	21	—	15	—	66	—
	Urinary System. Other Diseases	23	—	39	—	17	1	10	1	20	—
11	Generative System	19	—	37	—	15	—	11	—	50	—
12	Organs of Locomotion	11	—	18	—	7	1	3	—	19	—
13	Cellular Tissue	34	—	52	—	18	—	38	—	62	—
14	Cutaneous System	192	—	318	—	98	—	104	—	376	—
	III. *Debility*	40	—	127	—	63	—	42	—	207	1
	IV. *Poisons*	22	—	23	2	10	—	13	—	20	2
	V. *Injuries.*										
1	General	—	1	2	3	—	1	—	1	1	1
2	Local	175	1	344	2	130	1	176	5	474	2
3	In action	—	—	—	—	—	—	—	—	—	—
	No appreciable Disease	5	—	3	—	—	—	—	—	3	—
	Cause unknown (refers to deaths only)	—	—	—	—	—	—	—	—	—	—
	General total	2,461	24	5,943	73	2,176	10	3,801	27	5,633	86

OFFICER, showing the PREVALENCE and MORTALITY of the DIFFERENT CLASSES COMMAND with the ratios per 1,000 of Strength during the year 1882.

Rohil-cund.		Meerut.		Sirhind.		Lahore.		Rawal Pindi.		Peshawar.		Punjab Frontier.		Quetta Brigade.		Marching.		Total.	
2,873		5,062		4,234		3,483		3,579		2,636		89		939		1,426		36,330	
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
7	1	12	1	3	—	1	—	3	—	4	—	2	—	5	—	2	—	64	4
249	8	603	1	241	6	217	8	418	6	260	7	—	—	88	3	40	1	4,239	105
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
631	2	3,046	1	940	2	4,123	3	1,575	3	3,018	4	279	2	239	—	184	—	19,467	28
1	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	3	2	73	45
7	—	15	—	20	—	7	—	16	3	12	—	—	—	69	—	2	—	181	4
885	12	3,678	3	1,304	8	4,348	11	2,012	12	3,294	11	281	2	401	3	231	3	24,024	186
112	—	122	—	161	—	153	—	174	—	58	—	3	—	55	—	14	—	1,309	—
414	—	589	—	187	—	289	—	352	—	94	—	4	—	57	—	139	—	3,139	—
122	—	103	—	91	—	66	—	58	1	74	—	2	—	22	—	12	—	791	1
25	1	29	2	16	2	33	7	26	—	29	3	—	—	3	—	3	1	263	24
—	—	1	—	—	—	5	—	1	—	—	—	—	—	14	—	—	—	24	1
1	—	6	—	9	—	3	—	8	—	7	1	—	—	4	—	4	—	153	1
674	1	790	2	464	2	549	7	619	1	262	4	9	—	155	—	172	1	5,679	27
33	—	66	6	84	3	49	6	65	2	44	6	1	—	16	1	8	1	643	40
32	—	54	—	40	—	48	—	91	—	55	—	1	—	29	—	4	—	549	—
27	—	54	—	36	—	53	—	32	—	29	—	1	—	4	—	—	—	458	—
1	—	3	—	1	—	1	—	1	—	3	—	—	—	—	—	1	—	18	—
54	1	53	3	80	4	45	—	77	1	41	5	1	—	32	—	8	—	605	17
88	—	93	—	45	—	40	—	84	—	18	—	—	—	5	—	13	—	683	—
17	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19	—
121	4	191	1	173	3	328	1	230	3	124	9	4	—	78	1	33	2	1,903	30
536	6	812	7	786	12	823	8	742	12	505	8	17	—	264	2	101	—	7,875	95
359	—	658	—	440	—	304	—	408	—	171	—	7	—	26	—	138	—	4,041	—
70	—	94	—	68	—	52	—	74	1	22	—	1	—	5	—	12	—	612	1
23	—	47	2	34	1	26	1	30	—	11	—	1	—	4	1	12	—	297	7
40	—	46	—	47	1	35	—	43	—	28	—	2	—	—	—	17	—	390	1
15	—	28	—	29	—	15	—	19	—	10	—	—	—	5	—	2	—	181	1
48	—	89	—	82	—	70	—	88	—	47	—	4	—	4	—	17	—	653	—
144	—	339	—	228	—	296	—	304	—	130	—	38	—	36	—	28	—	2,631	—
54	—	119	—	128	—	157	—	74	—	75	—	2	—	19	—	9	—	1,116	1
3	—	23	—	8	—	23	—	15	—	11	—	—	—	4	—	4	—	179	4
—	—	1	2	1	—	1	2	2	4	1	1	—	—	1	—	—	1	10	17
223	—	518	15	476	3	406	5	557	6	259	1	9	1	72	1	81	2	900	45
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	7	—	8	—	5	—	7	—	4	—	—	—	—	—	1	—	47	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3,450	24	7,764	41	4,462	37	7,674	41	5,574	42	5,144	45	379	3	1,160	9	892	10	56,513	472

Ratio per 1,000

Order.	Military Divisions.	Presidency.		Allahabad.		Saugor.		Gwalior.		Oudh.	
	Average Strength.	2,127		3,453		1,373		1,647		3,440	
	Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
	I. *General Diseases.*										
	Febrile Group.										
	Eruptive Fevers	—	—	1·5	·29	—	—	1·8	—	5·5	·29
	Continued „	73·8	1·41	310·7	6·08	218·7	1·45	35·2	4·25	154·9	9·30
	Yellow Fever	—	—	—	—	—	—	—	—	—	—
	Paroxysmal Fevers	246·7	·47	318·3	2·32	457·0	—	1396·3	·61	257·0	·29
	Cholera	1·9	·47	4·9	2·90	·7	—	·6	·61	13·8	8·72
	Other diseases	1·9	—	2·3	—	·7	—	6·1	·61	2·9	—
	Total	326·3	2·35	637·7	11·59	677·1	1·45	1442·0	6·08	453·1	18·90
	Constitutional Group.										
	Rheumatism	24·9	—	44·3	—	25·5	—	44·9	—	41·3	—
	Primary Syphilis	57·4	—	72·4	—	136·3	—	42·5	—	129·4	—
	Secondary „	11·7	—	22·0	—	26·2	—	15·8	—	23·7	—
	Tubercular Diseases	6·6	1·88	9·0	·29	4·4	—	4·9	—	11·6	·87
	Scurvy and Purpura	—	—	·6	·29	—	—	—	—	·3	—
	Other diseases	3·3	—	26·3	—	4·4	—	·6	—	1·7	—
	Total	103·9	1·88	174·6	·58	196·8	—	108·7	—	207·0	·87
	II. *Local Diseases.*										
	Diseases of the—										
1	Nervous System	13·6	·47	33·1	2·02	11·7	1·45	24·9	1·21	23·5	·87
2	Eye „	10·3	—	15·6	—	14·6	—	19·4	—	19·5	—
3	Ear „	14·1	—	12·2	—	12·4	—	20·0	—	29·1	—
4	Nose „	·5	—	·6	—	1·5	—	—	—	·6	—
5	Circulatory System	11·7	·47	15·3	—	8·7	—	33·4	1·21	20·1	—
6	Absorbent „	13·6	—	39·7	—	13·1	—	15·2	—	25·6	—
7	Ductless Glands	·5	—	—	—	—	—	—	—	—	—
8	Respiratory System	46·5	·94	64·0	·29	24·1	·73	52·8	·61	52·6	·29
9	Digestive „	246·8	4·23	311·9	4·63	167·6	·73	236·6	3·03	309·3	2·62
10	Urinary System { Gonorrhœa	107·7	—	116·7	—	182·2	—	102·6	—	139·2	—
	Urinary System { Sequelæ of Gonorrhœa	16·5	—	21·7	—	15·3	—	9·1	—	19·8	—
	Urinary System { Other diseases	10·8	—	11·3	—	12·4	·73	6·1	·61	5·8	—
11	Generative System	8·9	—	10·7	—	10·9	—	6·7	—	14·5	—
12	Organs of Locomotion	5·2	—	5·2	—	5·1	·73	1·8	—	5·5	—
13	Cellular Tissue	16·0	—	15·1	—	13·1	—	23·1	—	13·0	—
14	Cutaneous System	90·3	—	92·1	—	71·4	—	63·1	—	109·3	—
	III. *Debility*	18·8	—	36·8	—	45·9	—	25·5	—	60·2	·29
	IV. *Poisons*	10·3	—	6·7	·58	7·3	—	7·9	—	5·8	·58
	V. *Injuries.*										
1	General	—	·47	·6	·87	—	·73	—	·61	·3	·29
2	Local	82·3	·47	90·6	·58	94·8	·73	106·9	3·03	157·8	·58
3	In action	—	—	—	—	—	—	—	—	—	—
	No appreciable disease	2·4	—	·9	—	—	—	—	—	·9	—
	Cause unknown (refers to deaths only)	—	—	—	—	—	—	—	—	—	—
	General Total	1157·0	11·28	1721·1	21·74	1586·0	7·28	2307·8	16·39	1637·5	25·00

of Mean Strength.

Rohilcund.		Meerut.		Sirhind.		Lahore.		Rawal Pindi.		Peshawar.		Punjab Frontier.		Quetta Brigade.		Marching.		Total.	
2,873		5,062		4,234		3,433		3,579		2,636		89		939		1,426		26,290	
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
2·4	·35	2·4	·20	·7	—	·3	—	·8	—	1·5	—	—	—	5·3	—	1·4	—	1·8	·11
86·7	2·78	118·6	·20	56·9	1·42	63·2	2·33	116·8	1·67	98·6	2·65	22·5	—	93·7	3·20	28·1	·70	116·7	2·89
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
216·2	·70	599·4	·20	223·0	·47	1201·0	·87	449·1	·84	1144·9	1·52	3134·8	22·47	254·5	—	129·0	—	535·8	·77
·3	·35	·4	—	—	—	—	—	—	—	—	—	—	—	—	—	2·1	1·40	2·0	1·24
2·4	—	2·9	—	4·7	—	2·0	—	4·5	·84	4·6	—	—	—	73·5	—	1·4	—	5·0	·11
308·0	4·18	723·7	·59	284·3	1·89	1266·5	3·20	562·2	3·35	1249·6	4·17	3157·3	22·47	427·0	3·20	162·0	2·10	661·3	5·12
39·0	—	21·0	—	38·0	—	44·6	—	48·6	—	22·0	—	38·7	—	58·6	—	9·8	—	36·0	—
144·1	—	104·1	—	44·2	—	84·2	—	96·3	—	35·6	—	44·9	—	60·7	—	97·5	—	86·4	—
42·5	—	20·3	—	21·5	—	19·2	—	16·2	·28	28·1	—	22·5	—	23·4	—	8·4	—	21·8	·03
3·7	·35	5·7	·39	3·8	·47	9·6	2·04	7·3	—	11·0	1·11	—	—	3·2	—	2·1	·70	7·2	·66
—	—	·2	—	—	—	1·4	—	·3	—	—	—	—	—	14·9	—	—	—	·7	·03
·3	—	1·2	—	2·1	—	·9	—	2·2	—	2·7	·38	—	—	4·3	—	2·8	—	4·2	·03
234·6	·35	155·5	·39	109·6	·47	159·9	2·04	172·9	·28	99·4	1·52	101·1	—	165·1	—	120·6	·70	156·3	·74
11·1	—	13·0	1·18	19·8	·71	14·3	1·75	18·2	·56	16·7	2·27	11·2	—	17·0	1·06	5·6	·70	17·7	1·10
11·1	—	10·6	—	9·5	—	14·0	—	25·4	—	20·8	—	11·2	—	30·9	—	2·8	—	15·1	—
9·4	—	10·6	—	8·5	—	15·4	—	8·9	—	11·0	—	11·2	—	4·3	—	—	—	12·6	—
·3	—	·6	—	·2	—	·3	—	·3	—	1·1	—	—	—	—	—	·7	—	·5	—
18·8	·35	10·4	·59	18·9	·94	13·1	—	21·5	·28	15·6	1·90	11·2	—	34·1	—	5·6	—	16·7	·47
30·7	—	18·3	—	10·6	—	11·7	—	23·5	—	6·8	—	—	—	5·3	—	9·1	—	18·8	—
5·9	—	·2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	·5	—
42·1	1·39	37·6	·20	40·9	·71	95·5	·29	64·3	·84	47·0	3·41	44·9	—	83·1	1·06	23·2	1·40	52·4	·82
166·6	2·09	159·8	1·38	185·7	2·83	239·7	2·33	207·3	3·35	191·6	3·04	191·0	—	281·1	2·13	70·8	—	216·8	2·61
125·0	—	129·5	—	103·9	—	88·6	—	114·0	—	64·9	—	78·7	—	27·7	—	96·8	—	111·2	—
24·4	—	18·5	—	16·1	—	15·1	—	20·7	·28	8·3	—	11·2	—	5·3	—	8·4	—	16·8	·03
8·0	—	9·2	·39	8·0	·24	7·6	·29	8·4	—	4·2	—	11·2	—	4·3	1·06	8·4	—	8·2	·19
13·9	—	9·1	—	11·1	·24	10·2	—	12·0	—	10·6	—	22·5	—	—	—	11·9	—	10·7	·03
5·2	—	5·5	—	6·8	—	4·4	—	5·3	—	3·8	—	—	—	5·3	—	1·4	—	5·0	·03
16·7	—	17·5	—	19·4	—	20·4	—	24·6	—	17·8	—	44·9	—	4·3	—	11·9	—	18·0	—
50·1	—	66·7	—	53·9	—	86·2	—	84·9	—	49·3	—	427·0	—	38·3	—	19·7	—	72·4	—
18·8	—	23·4	—	30·2	—	45·7	—	20·7	—	28·5	—	22·5	—	20·3	—	6·3	—	30·7	·03
1·1	—	4·5	—	1·9	—	6·7	—	4·2	—	4·2	—	—	—	4·3	—	2·8	—	4·9	·11
—	—	·2	·39	·2	—	·3	·58	·5	1·12	·4	·38	—	—	1·1	—	—	·70	·3	·47
77·6	—	101·9	2·96	112·4	·71	118·3	1·46	155·6	1·67	98·3	·38	101·1	11·24	76·6	1·06	56·8	1·40	107·3	1·24
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1·4	—	1·4	—	1·9	—	1·4	—	2·0	—	1·5	—	—	—	—	—	·7	—	1·3	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200·8	8·36	1527·7	8·06	1053·8	8·74	2235·3	11·94	1557·4	11·78	1951·4	17·07	4258·4	33·71	1235·4	9·58	635·5	7·01	1555·5	12·99

ABSTRACT No. XVII.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the STATIONS in the BENGAL COMMAND at which the ADMISSIONS and DEATHS from ENTERIC FEVER took place in each of the four quarters of the year 1882.

Divisions.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Presidency	Fort William	1	—	1	1	—	—	3	2	5	3
	Dum-Dum	1	—	—	—	—	—	—	—	1	—
Allahabad	Allahabad	1	1	2	—	3	4	2	—	8	5
	Fort Allahabad.	1	1	1	—	—	—	—	—	2	1
	Cawnpore	3	1	15	8	—	2	—	—	18	11
	Dinapore	—	—	1	—	3	1	—	—	4	1
	Benares	—	—	2	—	2	2	—	—	4	2
	Chunar	1	—	—	1	—	—	—	—	1	1
Saugor	Jubbulpore	—	—	—	—	1	1	—	—	1	1
	Saugor	—	—	4	1	1	—	—	—	5	1
	Nowgong	1	—	1	—	—	—	—	—	2	—
Gwalior	Morar	—	1	—	—	3	2	—	—	3	3
	Fortress Gwalior.	—	—	—	—	8	3	—	—	8	3
	Jhansi	—	—	—	—	2	1	—	—	2	1
Oudh	Lucknow	4	3	7	4	15	4	5	2	31	13
	Sitapur	16	4	27	10	1	1	1	1	45	16
	Fyzabad	2	1	3	1	—	—	1	1	6	3
Rohilcund	Bareilly	1	—	3	1	1	—	—	—	5	1
	Moradabad	—	—	1	1	1	—	1	1	3	2
	Shahjehanpur	2	—	6	3	—	—	—	—	8	3
	Ranikhet	—	—	3	1	2	—	1	1	6	2
	Choubuttia	2	—	—	—	—	—	—	—	2	—
	Naini Jal	—	—	1	—	—	—	—	—	1	—
Meerut	Meerut	—	—	4	—	—	—	—	—	4	—
	Fatehgarh	—	—	—	—	—	—	1	1	1	1
	Agra	—	—	—	—	1	—	—	—	1	—

Divisions.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Meerut—*cont.*	Muttra	—	—	2	—	—	—	—	—	2	—
	Roorkee	—	—	—	—	5	—	—	—	5	—
	Chakrata	1	—	—	—	—	—	—	—	1	—
	Qandour	—	—	1	—	1	—	—	—	2	—
Sirhind	Umballa	—	—	—	—	1	1	1	1	2	2
	Jullundur	2	—	1	—	—	—	1	—	4	—
	Dagshai	—	—	—	—	1	1	—	—	1	1
	Jutogh	—	—	1	1	—	—	—	—	1	1
	Solon	—	—	4	1	1	—	1	—	6	1
	Kasauli	—	—	1	1	1	—	—	—	2	1
Lahore	Meean Meer	—	1	4	1	1	—	6	—	11	2
	Ferozepore	—	—	4	1	5	3	—	—	9	4
	Mooltan	—	—	—	—	1	1	—	—	1	1
	Dalhousie	—	—	1	—	—	—	—	—	1	—
Rawal Pindi	Rawal Pindi	1	1	4	1	2	1	1	—	8	3
	Fort Attock	—	—	—	—	2	—	—	—	2	—
	Chungla Gully	—	—	1	1	—	—	—	—	1	1
	Kalabagh	—	—	1	1	—	—	—	—	1	1
	Kooldunnah	—	—	2	1	—	—	—	—	2	1
	Murree	—	—	1	—	—	—	—	—	1	—
Peshawar	Peshawar	1	—	3	1	1	—	—	—	5	1
	Nowshera	—	—	—	—	1	1	—	—	1	1
	Cherat	—	—	3	—	4	4	—	—	7	4
Punjab Frontier.	Quetta	1	—	2	1	7	1	1	1	11	3
	Gulistan	—	—	1	—	—	—	—	—	1	—
	Marching	1	—	—	—	—	—	2	1	3	1
	Total	43	14	119	43	78	34	28	12	268	103

ABSTRACT No. XVIII.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the STATIONS in the BENGAL COMMAND at which the ADMISSIONS and DEATHS from CHOLERA took place in each of the four quarters of the year 1882.

Divisions.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Presidency	Fort William	—	—	—	—	—	—	1	1	1	1
	Dum-Dum	—	—	2	—	—	—	—	—	2	—
	Barrackpore	—	—	—	—	1	—	—	—	1	—
Allahabad	Dinapore	2	1	1	1	2	2	—	—	5	4
	Benares	—	—	—	—	11	6	—	—	11	6
	Chunar	—	—	—	—	1	—	—	—	1	—
Sirhind	Saugor	—	—	—	—	—	—	1	—	1	—
Gwalior	Fortress Gwalior.	1	1	—	—	—	—	—	—	1	1
Oudh	Lucknow	1	—	1	1	4	4	1	—	7	5
	Military Prison	—	—	—	—	5	3	—	—	5	3
	Fyzabad	—	—	1	—	28	20	—	—	29	20
	Sitapur	—	—	—	—	3	2	—	—	3	2
Rohilcund	Bareilly	—	—	—	—	1	1	—	—	1	1
Meerut	Agra	1	—	—	—	1	—	—	—	2	0
	Troops on the march.	1	1	—	—	1	1	1	—	3	2
	Total	6	3	5	2	58	39	4	1	73	45

ABSTRACT No. XIX.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the PREVALENCE of DYSENTERY, DIARRHŒA, and HEPATITIS in each of the DIVISIONS in the BENGAL COMMAND during the Year 1882.

Divisions.	Presidency.		Allahabad.		Saugor.		Gwalior.		Oudh.		Rohilcund.		Meerut.		Sirhind.		Lahore.		Rawal Pindi.		Peshawar.		Punjab Frontier.		Quetta Brigade.		Marching.		Total.	
Strength.	2,127		3,453		1,372		1,647		3,440		2,873		5,062		4,234		3,433		3,579		2,636		89		939		1,426		36,330	
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Dysentery -	135	4	133	3	20	—	28	2	179	1	92	3	72	3	59	2	57	1	67	5	68	3	1	—	14	—	7	—	962	27
Diarrhœa -	111	—	194	1	57	—	134	—	228	—	97	—	132	—	152	—	207	—	131	—	104	—	6	—	116	1	38	—	1,707	2
Hepatitis and Abscess of Liver -	72	5	197	9	19	1	37	3	137	7	42	3	127	4	149	8	112	4	92	6	62	2	—	—	13	1	7	—	1,066	53
Total -	318	9	524	13	96	1	199	5	544	8	231	6	331	7	360	10	376	5	290	11	234	5	7	—	143	2	72	—	3,725	82

Ratio per 1,000 of Mean Strength.

Dysentery -	63·5	1·88	38·5	·87	14·6	—	17·0	1·21	52·0	·29	32·0	1·04	14·1	·59	13·9	·47	16·6	0·29	18·7	1·40	25·8	1·14	11·2	—	14·9	—	18·9	—	26·2	·74
Diarrhœa -	52·2	—	56·2	·29	41·5	—	81·3	—	66·3	—	33·8	—	26·0	—	35·9	—	60·3	—	36·6	—	39·5	—	67·4	—	123·5	1·06	26·7	—	47·0	·06
Hepatitis and Abscess of Liver -	33·8	2·35	57·1	2·61	13·9	·73	22·5	1·82	39·8	2·04	14·6	1·04	25·0	·79	35·2	1·89	32·6	1·17	25·7	1·67	23·5	·76	—	—	13·9	1·06	4·9	—	29·3	1·46
Total -	149·5	4·23	151·8	3·77	70·0	·73	120·8	3·03	158·1	2·33	80·4	2·08	65·1	1·38	85·0	2·36	109·5	1·46	81·0	3·07	88·8	1·90	78·6	—	152·3	2·13	50·5	—	102·5	2·26

ABSTRACT No. XX.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the PREVALENCE and MORTALITY in the Cantonments of the BENGAL COMMAND, due to DYSENTERY, DIARRHŒA, and HEPATITIS, in each Quarter of the Year 1832.

—	Strength.	Dysentery.				Diarrhœa.				Hepatitis (including Abscess of Liver).				Total.			
		Number.		Ratio per 1,000 of Strength.		Number.		Ratio per 1,000 of Strength.		Number.		Ratio per 1,000 of Strength.		Number.		Ratio per 1,000 of Strength.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
1st Quarter -	37,130	163	8	4·4	·22	308	1	8·3	·02	251	13	6·8	·35	722	22	19·5	·59
2nd „ -	36,834	204	4	5·6	·11	384	—	10·4	—	251	4	6·8	·11	839	8	22·8	·22
3rd „ -	35,661	375	9	10·5	·25	675	1	18·9	·03	326	22	9·1	·62	1,376	32	38·5	·90
4th „ -	34,727	207	6	6·0	·17	353	—	10·2	—	248	14	7·1	·40	808	20	23·3	·57
Total -	36,088	949	27	26·3	·75	1,720	2	47·7	·05	1076	53	29·8	1·47	3,745	82	103·8	2·27

ABSTRACT No. XXI.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the COMPARATIVE MORTALITY and INVALIDING in the THREE GRADES of COMMISSIONED OFFICERS, NON-COMMISSIONED OFFICERS, and PRIVATES during the Year 1882, and for the Ten previous Years in the BENGAL COMMAND:—

Years.	Average Strength.			Number of Deaths.			Invalided.			Ratio per 1,000.					
										Deaths.			Invalids.		
	Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.
1872 - - -	1,376	3,460	33,319	20	131	864	93	185	1,371	14·53	37·86	25·93	67·59	53·47	41·15
1873 - - -	1,371	2,777	34,397	20	82	482	97	174	1,255	14·59	29·53	14·01	70·75	62·66	36·49
1874 - - -	1,443	3,815	33,836	23	65	477	64	148	1,235	15·94	17·04	14·10	44·35	38·79	36·50
1875 - - -	1,485	3,842	34,053	10	96	544	75	142	1,189	6·73	24·99	15·98	50·51	36·96	34·92
1876 - - -	1,735	3,820	33,417	39	95	503	96	178	1,257	22·48	24·87	15·05	55·33	46·60	37·62
1877 - - -	2,066	3,787	32,761	29	57	357	88	136	1,162	14·04	15·05	10·90	40·17	35·91	35·47
1878 - - -	2,018	3,782	32,374	28	86	694	79	141	1,300	13·88	22·74	21·44	39·15	37·28	40·16
1879 - - -	2,010	4,266	34,615	74	183	1,444	124	204	1,437	36·82	42·90	41·72	61·69	47·82	41·51
1880 - - -	1,699	5,369	42,797	31	149	1,085	95	220	1,819	18·25	27·75	25·35	55·92	40·98	42·50
1881 - - -	1,116	4,524	33,373	17	95	561	76	204	1,571	15·23	21·00	16·81	68·10	45·09	47·07
Average for 10 years -	1,632	3,944	34,494	29·10	103·90	701·10	88·20	173·20	1359·60	17·83	26·34	20·33	54·04	43·91	39·42
1882 - - -	1,101	4,183	31,318	12	65	406	51	164	1,071	10·90	15·54	12·96	46·32	39·21	34·20
1882 { Killed in action and died from wounds received in battle - - - }	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1882 { Number of deaths, excluding those killed in action and died from wounds received in battle - - - }	12	65	406	—	—	—	10·90	15·54	12·96	—	—	—			

ABSTRACT No. XXII.—TABLE showing the ADMISSIONS, MORTALITY, and INVALIDING in each CORPS serving in the BENGAL COMMAND during the year 1882, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER.

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average daily Sick.	Ratio per 1,000 of Strength.				Sick each Time to Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average daily Sick.				
CAVALRY.													Yrs. mo.
1st Dragoon Guards - -	462	725	8	23	30·97	1569·3	17·32	49·78	67·06	24·47	15·59	Meerut, 12 months - - - -	3 0
6th „ „ - -	439	658	4	24	33·27	1498·9	9·11	54·67	75·79	27·66	18·46	Sialkot, 11 months; march, 1 month - -	5 0
8th Hussars - - -	451	820	5	21	31·28	1902·6	11·60	48·72	72·58	26·49	13·92	Rawal Pindi, 12 months - - - -	4 0
9th Lancers - - -	426	455	5	16	18·61	1068·1	11·74	37·56	43·69	15·95	14·93	Umballa, 12 months - - - - -	8 0
10th Hussars - - -	460	702	4	29	45·78	1526·1	8·70	63·04	99·52	36·33	23·80	Lucknow, 12 months - - - -	10 0
13th „ - - -	420	622	2	41	31·50	1481·0	4·76	97·62	75·00	27·38	18·48	Muttra, 12 months - - - - -	9 0
Total - - -	2,638	3,982	28	154	191·41	1509·5	10·61	58·38	72·56	26·48	17·55		
ROYAL ARTILLERY.													
D/A Royal Horse Artillery -	155	206	1	9	11·26	1329·0	6·45	58·06	72·65	26·52	19·95	Rawal Pindi, 12 months - - - -	6 0
E/A „ „ -	154	198	3	16	11·54	1285·7	19·48	103·90	74·94	27·35	21·27	Meerut, 12 months - - - - -	6 0
F/A „ „ -	155	172	2	—	5·96	1109·7	12·90	—	38·45	14·03	12·65	Umballa, 12 months - - - - -	7 0
G/A „ „ -	164	211	2	11	14·35	1286·6	12·20	67·06	87·50	31·94	24·32	Meerut, 11 months; march, 1 month - -	7 0
J/A „ „ -	12	—	—	2	—	—	—	166·67	—	—	—	Sialkot and march, 1 month - - -	7 0
L/A „ „ -	152	275	4	6	14·95	1809·2	26·32	38·47	98·36	35·90	19·84	Sialkot, 10 months; march months - -	6 0

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Daily Average Sick.	Ratio per 1,000 of Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.				yrs. mo.
A/B Royal Horse Artillery -	15	3	—	1	·48	200·0	—	66·67	32·00	11·68	58·40	Umballa and march, 1 month - - -	10 0
K/B „ „ -	168	182	3	5	8·60	1083·3	17·86	29·76	51·19	18·68	17·25	Umballa, 12 months - - - - -	2 0
M/B „ „ -	7	1	—	—	—	142·9	—	—	—	—	—	March, ½ month - - - - -	5 0
N/B „ „ -	154	196	2	5	11·36	1272·7	12·99	32·47	73·77	26·92	21·16	Lucknow, 12 months - - - - -	5 0
B/1 Royal Artillery - -	113	320	1	5	11·93	2831·9	8·85	44·25	105·58	38·53	13·61	Ferozepore, 12 months - - - -	2 0
G/1 „ „ - -	147	223	8	3	12·75	1517·0	54·42	20·41	86·73	31·66	20·87	Benares, 12 months - - - - -	2 0
H/1 „ „ - -	132	136	1	4	6·41	1030·3	7·58	30·30	48·56	17·72	17·20	Jullundur, 9½ months; march, ½ month - -	14 0
4/1 Lancashire Divn. - -	125	208	2	5	7·53	1664·0	16·00	40·00	60·24	21·99	13·21	Ferozepore, 12 months - - - -	3 0
5/1 South Irish Divn. - -	93	89	—	1	3·02	957·0	—	10·75	32·47	11·85	12·39	Umballa, 2½ months; Jutogh, 7½ months; march, 2 months.	12 0
5/1 Western Divn. - -	105	140	1	3	6·48	1333·3	0·52	28·57	61·71	22·53	16·89	Gwalior, 11½ months; march, ½ month - -	4 0
5/1 Southern Divn. - -	172	110	—	6	8·55	639·5	—	33·88	49·71	18·14	28·87	Fort William, 10 months; Agra, 2 months - -	7 0
5/1 Lancashire Divn. - -	114	340	2	7	10·30	2982·5	17·54	61·40	90·35	33·98	11·06	Fort Lahore, 12 months - - - -	7 0
6/1 Western Divn. - -	107	201	2	6	9·01	1878·5	18·69	56·07	84·21	30·74	16·36	Morar, 12 months - - - - -	12 0
6/1 Southern Divn. - -	108	150	3	5	5·43	1388·9	27·78	46·30	50·23	18·35	13·21	Fort Allahabad, 11½ months; march, ½ month -	7 0
6/1 South Irish Divn. - -	84	85	1	2	5·34	1011·9	11·90	23·81	63·57	23·20	22·93	Rawal Pindi, 6 months; Khyra Gully, 6 months -	7 0
7/1 Northern Divn. - -	91	112	1	2	6·76	1230·8	10·99	21·98	74·29	27·11	22·03	Rawal Pindi, 6 months; Ghora Dhoka, 4 months; Khyra Gully, 2 months.	5 0
7/1 London Divn. - -	125	179	4	—	10·31	1432·0	32·00	—	82·48	30·11	21·02	Agra, 10 months; Fort William, 2 months - -	12 0
7/1 Southern Divn. - -	90	193	3	5	8·39	2144·4	33·33	55·56	93·22	34·03	15·87	Peshawar, 12 months - - - - -	7 0

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength.				Sick each to Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.	Average Time			yrs. mo.
8/1 Northern Divn. - -	117	304	1	—	11·19	2598·3	8·55	—	95·64	34·91	13·44	Fort Attock, 10½ months; march, 1 month - -	4 0
8/1 London Divn. - -	107	457	—	4	8·47	4271·0	—	37·38	79·16	28·89	6·76	Delhi, 12 months - - - - -	7 0
9/1 Scottish Divn. - -	95	190	3	9	10·28	2000·0	31·58	94·74	108·21	39·50	19·75	Quetta, 12 months - - - - -	11 0
9/1 Northern Divn. - -	102	144	1	5	7·30	1411·8	9·80	49·02	71·57	26·12	18·50	Campbellpore, 4 months; Kallabagh, 6 months; Rawal Pindi, 2 months.	5 0
J/2 Royal Artillery - -	145	200	—	4	9·93	1379·3	—	27·59	68·48	24·99	18·12	Allahabad, 12 months - - - - -	5 0
R/2 „ „ - -	164	419	3	18	16·25	2554·9	18·29	109·76	99·09	36·17	14·16	Peshawar, 12 months - - - - -	5 0
K/3 „ „ - -	154	277	—	2	11·60	1798·7	—	12·99	75·32	27·49	15·29	Nowgong, 12 months - - - - -	2 0
L/3 „ „ - -	154	296	—	6	14·58	1922·1	—	38·96	94·68	34·56	17·98	Dinapore, 12 months - - - - -	3 0
M/3 „ „ - -	151	215	—	6	10·57	1423·8	—	39·74	70·00	25·55	17·94	Meerut, 12 months - - - - -	2 0
N/3 „ „ - -	161	306	5	5	11·79	1900·6	31·06	31·06	73·23	26·73	14·06	Cawnpore, 12 months - - - - -	2 0
O/3 „ „ - -	149	171	2	2	14·14	1147·7	13·42	13·42	94·90	34·64	30·18	Algra, 12 months - - - - -	2 0
P/3 „ „ - -	158	96	—	14	9·67	607·6	—	88·61	61·20	22·34	36·77	Bareilly 10 months; Meean Meer, ½ month; march, 1½ months.	6 0
Q/3 „ „ - -	153	138	—	7	5·10	902·0	—	45·75	33·33	12·17	13·49	Barrackpore, 10 months; march, 2 months - -	6 0
R/3 „ „ - -	139	285	2	4	6·50	2050·4	14·39	28·78	46·76	17·07	8·32	Morar, 11 months; march, 1 month - - -	6 0
B/4 „ „ - -	143	251	2	4	10·99	1755·2	13·99	27·97	76·85	28·05	15·98	Rawal Pindi, 10½ months; march, 1½ months -	9 0
C/4 „ „ - -	172	544	2	7	18·04	3162·8	11·63	40·70	104·88	38·28	12·10	Meean Meer, 12 months - - - -	9 0
D/4 „ „ - -	171	208	—	—	9·10	1216·4	—	—	53·22	19·42	15·97	Lucknow, 11 months; march, 1 month - -	9 0

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.				
													yrs. mo.
H/4 Royal Artillery - -	167	352	3	7	12·19	2107·8	17·96	41·92	72·99	26·64	12·64	Meean Meer, 10 months; Bareilly, ½ month; march, 1½ months.	9 0
F/4 „ „ - -	124	231	3	16	11·71	1862·9	24·19	129·03	94·44	34·47	18·50	Fyzabad, 10 months; Morar, 1 month; march, 1 month.	9 0
G/4 „ „ - -	142	180	1	10	11·08	1267·6	7·04	70·42	78·03	28·48	22·47	Meerut, 12 months - - - - -	9 0
L/4 „ „ - -	161	525	3	10	12·16	3260·9	18·63	62·11	75·53	21·57	8·45	Mooltan, 12 months - - - - -	6 0
O/4 „ „ - -	146	232	1	8	10·99	1589·0	6·85	54·79	75·27	27·48	17·29	Saugor, 10 months; march, 2 months - -	6 0
15/8 „ „ - -	4	—	—	—	—	—	—	—	—	—	—	March, ½ month - - - - -	14 0
18/8 „ „ - -	6	—	—	—	—	—	—	—	—	—	—	March, 25 days - - - - - -	14 0
19/8 „ „ - -	6	3	—	1	1·43	500·0	—	166·67	238·33	86·99	173·98	Fortress Gwalior and march, 1 month - -	14 0
1/9 „ „ - -	3	—	—	—	—	—	—	—	—	—	—	March, ½ month - - - - -	14 0
Total - - -	5,936	9,954	78	258	435·77	1676·9	13·14	43·46	73·41	26·80	15·98		
41st Coy., Royal Engineers -	50	44	—	1	2·05	880·0	—	20·00	41·00	14·97	17·01	Roorkee, 12 months - - - - -	15 0
INFANTRY.													
2nd R.W. Surrey Regiment -	789	1,370	15	27	53·68	1736·4	19·01	34·22	68·04	24·83	14·30	Peshawar, 12 months; Det., Cherat, 6½ months -	5 0
2nd Northumberland Fusiliers	797	1,373	2	11	38·05	1722·7	2·51	13·80	47·74	17·43	10·12	Agra, 12 months - - - - -	3 0
2nd R. Warwickshire Regt. -	346	1,017	8	24	54·79	1199·3	9·43	23·30	64·61	23·58	19·66	Fort William, 12 months; Det., Barrackpore, 8 months.	5 0
2nd Liverpool Regiment -	691	2,650	13	35	70·22	3835·0	18·81	50·65	101·62	37·09	9·67	Meean Meer, 12 months; Det., Fort Lahore, 5 months; Det., Amritsar, 4½ months.	6 0

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.				
													yrs. mo.
2nd Norfolk Regiment -	940	1,844	11	24	75·47	1961·7	11·70	25·53	80·29	29·30	14·94	Umballa, 3½ months; Subathu, 3½ months; Morar, 5 months; Det., Jutogh, 6½ months.	9 0
2nd Lincolnshire Regiment -	340	678	24	3	39·09	1964·7	70·59	8·82	114·97	41·96	21·36	Sitapur, 11 months - - - - -	1 0
Half Bn. „ „ -	218	395	7	4	18·00	1811·9	32·11	18·35	82·57	30·14	16·63	Benares, 11 months; Det., Chunar, 9½ months -	1 0
2nd Devonshire „ -	833	887	5	11	38·64	1064·8	6·00	13·21	46·39	16·93	15·90	Jullundur, 12 months; Det., Bhagsu, 6½ months; Det., Dagshai, 6½ months.	6 0
1st Suffolk „ -	831	1,694	28	63	79·58	2038·5	33·69	75·81	95·76	34·95	17·15	Fyzabad, 12 months - - - - -	7 0
2nd W. Yorkshire „ -	914	1,492	15	19	64·15	1632·4	16·41	20·79	70·19	25·62	15·69	Nowshera, 12 months; Det., Cherat, 5 months; Dett., Fort Attock, 12 months.	5 0
1st Leicester „ -	61	28	1	2	2·63	459·0	16·39	32·79	43·11	15·74	34·28	Jhansi and march, 1 month - - - -	13 0
2nd „ „ -	891	1,400	6	9	60·49	1571·3	6·73	10·10	67·89	24·78	15·77	Jubbulpore, 12 months; Det., Sangor, 12 months	7 0
1st Royal Irish „ -	792	1,243	6	28	64·67	1569·4	7·58	35·35	81·65	29·80	18·99	Rawal Pindi, 12 months; Det., Gharrial, 5 months.	9 0
2nd Cheshire „ -	904	1,994	12	34	70·92	2205·8	13·27	37·61	78·45	28·63	12·98	Peshawar, 12 months; Det., Cherat, 8½ months -	10 9
1st R. W. Fusiliers - -	887	500	2	5	35·11	563·7	2·25	5·64	39·58	14·45	25·63	Chakrata, 10 months; march, 2 months - -	3 0
1st K. O. Borderers - -	772	693	3	7	31·80	897·7	3·89	9·07	41·19	15·03	16·75	Umballa 3 months; Dagshai, 9 months - -	8 0
1st East Lancashire Regiment	977	975	11	14	61·68	998·0	11·26	14·33	63·15	23·04	23·09	Ranikhet, 12 months - - - - -	3 0
1st W. Riding „ -	821	1,185	8	29	69·67	1443·4	9·74	35·32	84·86	30·97	21·46	Lucknow, 10 months; march, 2 months - -	8 0
1st Border Regiment - -	842	1,052	10	48	48·82	1249·4	11·88	57·01	57·98	21·16	16·94	Dum, Dum, 10½ months; march, 1½ months; Det., Barrackpore, 10 months.	9 0
1st Dorsetshire „ - -	62	66	—	1	1·29	1064·5	—	16·13	20·81	7·59	7·13	Jubbulpore and march, 1 month - - -	14 0
1st South Lancashire Regt. -	502	570	2	27	26·17	1135·5	3·98	53·78	52·13	19·03	16·76	Choubuttia, 10½ months; march, 1½ months -	11 0

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength.				Sick to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.	Average Time			yrs. mo.
Half Bn. South Lancas. Regt.	365	364	5	1	21·71	997·3	13·70	2·74	59·48	21·71	21·77	Shabjehanpur, 12 months	11 0
1st South Yorkshire „	876	1,351	6	52	63·77	1542·2	6·85	59·36	72·80	26·57	17·23	Bareilly, 12 months; Det., Moradabad, 12 months	11 0
2nd Dorsetshire „	406	725	2	34	33·81	1785·7	4·93	83·74	80·81	29·50	16·52	Roorkee, 12 months	12 0
Half Bn. 2nd Dorsetshire „	354	1,076	3	16	30·75	3039·5	8·47	45·20	86·86	31·71	10·48	Delhi, 12 months	12 0
4th King's Royal Rifle Corps	892	1,015	6	9	40·88	1137·9	6·73	10·09	45·83	16·73	14·70	Ferozepore, 12 months	6 0
2nd Gloucestershire Regt.	750	930	5	31	42·99	1240·0	6·67	41·33	57·32	20·92	16·87	Quetta, 12 months; Det., Gulistan, 9½ months	5 0
1st Manchester „	474	760	8	24	32·63	1603·4	16·88	50·63	68·84	25·13	15·67	Sialkot, 7½ months; Det., Fort Lahore, 9 months; Det., Amritsar, 7½ months.	13 0
1st York and Lancaster Regt.	457	822	9	30	43·94	1798·7	19·69	65·65	96·15	35·09	19·51	Morar, 6½ months	12 0
1st Durham L. Infantry	846	1,191	10	42	50·27	1407·8	11·82	49·65	59·42	21·69	15·41	Meerut, 12 months; Det., Fatehgarh, 12 months	11 0
2nd East Surrey Regt.	843	1,397	12	37	76·04	1657·2	14·23	43·89	90·20	33·92	19·87	Dinapore, 12 months; Det., Chunar, 3 months	12 0
1st Seaforth Highlanders	92	76	3	8	7·64	826·1	32·61	86·96	83·04	30·31	36·69	Lucknow, 1½ months	12 0
2nd „ „	649	923	8	10	53·91	1422·2	12·33	15·41	83·07	30·32	21·32	Sitapur, 1½ months; Lucknow, 10½ months	2 0
Half Bn. „ „	31	37	—	1	1·00	1193·5	—	32·26	32·26	11·77	9·86	Benares, 1½ months	2 0
2nd North Lancashire Regt.	963	1,735	17	39	67·12	1859·6	18·22	41·80	93·38	34·08	18·33	Allahabad, 12 months; Det., Fort Allahabad, 12 months.	9 0
1st Connaught Rangers	739	1 592	14	19	58·04	2154·3	18·94	25·71	78·54	28·67	13·31	Mooltan, 12 months; Det., Dera, Ismail, Khan, 11½ months.	4 0
2nd Scottish Rifles	937	1,343	17	20	67·59	1433·3	18·14	21·34	72·13	26·33	18·37	Cawnpore, 12 months	4 0

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.				
													yrs. mo.
2nd Derbyshire Regiment -	98	133	2	—	3·90	1357·1	20·41	—	39·80	14·53	10·70	Lucknow, 2 months - - - - -	0 2
2nd Manchester „ -	119	94	—	—	1·19	789·9	—	—	10·00	3·65	4·62	March, 1½ months - - - - -	0 1½
2nd Wiltshire „ -	588	822	3	1	39·48	1398·0	5·10	1·70	67·14	24·51	17·53	Rawal Pindi, 5 months; Khooldana, 6 months; Det., Baragully, 5½ months; Det., Chumghar Gully, 6 months.	0 11
1st Leinster „ -	820	903	8	23	45·41	1101·2	9·76	23·05	55·38	20·21	18·36	Umballa, 12 months; Det., Solon, 6½ months -	6 0
4th Bn. Rifle Brigade -	839	1,390	11	15	44·50	1656·7	13·11	17·88	53·04	19·36	11·69	Jhansi, 11 months; march, 1 month; Det., Fortress Gwalior, 12 months; Det., Nowgong, 12 months.	10 0
Total - - -	26,820	41,775	338	837	1850·49	1557·6	12·60	31·21	69·00	25·18	16·17		
Men Attached Corps, not stated.	538	626	20	26	41·72	977·7	37·17	48·33	77·55	28·30	28·95	Various station hospitals.	
Garrison Staff and Departments.	346	232	8	3	15·62	666·7	22·99	8·62	44·89	16·38	24·57	Various station hospitals.	
Grand Total - -	36,330	56,513	472	1,279	2537·06	1555·5	12·99	35·20	69·83	25·49	16·39		

ABSTRACTS XXIII. to XXXIII.

ABSTRACT No. XXIII.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into stationed at MADRAS during the year 1882, with the Ratios per

Orders.	Average Strength, 10,817. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.*							
	Febrile Group.							
	Eruptive Fevers { Small-pox	6	—	—	—	—	—	·70
	Eruptive Fevers { Other	6	—	—	—	—	—	·27
	Continued „ { Enteric	47	23	—	23	—	—	4·52
	Continued „ { Other	511	—	—	—	—	—	15·26
	Paroxysmal Fevers	1,370	3	1	4	2	—	40·29
	Cholera	15	9	—	9	—	—	·26
	Other diseases	12	1	—	1	—	—	·48
	Total	1,967	36	1	37	2	—	61·78
	Constitutional Group.							
	Rheumatism	328	—	—	—	8	2	18·07
	Primary Syphilis	1,187	—	—	—	—	—	95·12
	Secondary „	251	—	—	—	12	4	24·71
	Tubercular diseases	67	6	1	7	19	20	10·16
	Scurvy and Purpura	—	—	—	—	—	—	—
	Other diseases	28	2	—	2	3	1	1·71
	Total	1,861	8	1	9	42	27	149·77
	II.—*Local Diseases.* Diseases of the—							
1	Nervous System	149	15	—	15	38	4	10·22
2	Eye	152	—	—	—	7	3	7·04
3	Ear	119	—	—	—	5	6	5·34
4	Nose	7	—	—	—	1	—	·24
5	Circulatory System	231	9	1	10	63	17	20·02
6	Absorbent „	305	—	—	—	2	1	35·72
7	Ductless Glands	—	—	—	—	—	—	—
8	Respiratory System	333	3	—	3	9	3	15·80
9	Digestive „	2,430	26	2	28	70	17	123·89
10	Urinary System { Gonorrhœa	1,183	—	—	—	—	—	81·19
10	Urinary System { Sequelæ of Gonorr.	153	—	—	—	5	—	11·60
10	Urinary System { Other diseases	85	—	—	—	3	1	2·76
11	Generative System	187	—	—	—	3	1	8·39
12	Organs of Locomotion	68	—	—	—	6	5	5·87
13	Cellular Tissue	177	—	—	—	3	—	9·55
14	Cutaneous System	776	—	—	—	4	1	33·63
	III.—*Debility*	206	—	—	—	47	6	13·90
	IV.—*Poisons*	29	1	—	1	—	—	1·19
	V.—*Injuries.*							
1	General	1	4	—	4	—	—	·14
2	Local	1,121	12	—	12	11	4	43·25
3	In action	—	—	—	—	—	—	—
	No appreciable disease	24	—	—	—	—	—	1·16
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General Total	11,564	114	5	119	321	96	642·45
	Average of 10 years, 1872-81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000, from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
·6	—	—	—	·07	} ·8	·03	—	—	·05
·6	—	—	—	·02					
4·3	2·13	—	—	·42	} 102·2	1·19	—	—	3·26
47·2	—	—	—	1·41					
126·6	·37	·18	—	3·73	273·4	·35	·67	—	6·91
1·4	·83	—	—	·02	2·3	1·32	—	—	·04
1·1	·09	—	—	·04	2·6	·13	—	—	·09
181·8	3·42	·18	—	5·71	381·3	3·02	·67	—	10·35
30·3	—	·74	·18	1·67	31·0	·03	·93	·58	1·58
109·7	—	—	—	8·79	103·2	—	·03	—	8·13
23·2	—	1·11	·37	2·28	24·1	·06	1·12	·77	2·10
6·2	·65	1·75	1·85	·94	7·0	1·06	2·28	1·92	1·06
—	—	—	—	—	·2	—	—	—	·04
2·6	·18	·28	·09	·16	3·8	—	·64	·10	·36
172·0	·83	3·88	2·50	13·84	169·3	1·16	5·00	3·37	13·27
13·8	1·39	3·51	·37	·95	17·3	1·60	3·05	·71	1·14
14·0	—	·65	·28	·65	15·8	—	·51	·51	·81
11·0	—	·46	·56	·49	10·3	—	·29	·35	·35
·7	—	·09	—	·02	·5	—	·03	—	·02
21·4	·92	5·82	1·57	1·85	17·5	·93	3·91	2·57	1·36
28·2	—	·18	·09	3·30	29·3	—	—	—	3·23
—	—	—	—	—	·2	—	·03	—	·01
30·8	·28	·83	·28	1·46	34·5	·58	0·93	1·06	1·72
224·6	2·59	6·47	1·57	11·45	251·6	3·95	8·31	2·66	11·75
109·4	—	—	—	7·51	98·6	—	—	—	5·99
14·1	—	·46	—	1·07	13·5	—	·32	·13	·92
7·9	—	·28	·09	·26	8·8	·22	·22	·19	·39
17·3	—	·28	·09	·78	13·9	—	—	—	·56
6·3	—	·56	·46	·54	5·8	·06	·51	·38	·43
16·4	—	·28	—	·88	18·2	—	·10	·06	·66
71·7	—	·37	·09	3·11	79·9	—	·26	·22	3·20
19·0	—	4·35	·56	1·29	35·6	·03	7·02	4·33	2·06
2·7	·09	—	—	·11	3·5	·22	—	—	·11
·1	·37	—	—	·01	·2	·83	·03	·03	·00
103·6	1·11	1·02	·37	4·00	101·7	·71	·58	·74	3·67
—	—	—	—	—	—	—	—	—	—
2·2	—	—	—	·11	1·7	—	—	—	·06
—	—	—	—	—	—	—	—	—	—
1069·0	11·00	29·67	8·87	59·39	1309·0	13·31	31·78	17·32	62·06
1225·6	16·83	41·06	16·36	58·05	—	—	—	—	—

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT No. XXIV. — TABLE showing the AVERAGE STRENGTH, AVERAGE CONSTANTLY SICK, ADMISSIONS, DEATHS, and INVALIDS at the different STATIONS and CIRCLES in the MADRAS COMMAND, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER.

Divisions.	Stations.	Average Strength.	Average constantly Sick.	Admitted.	Died in and out of Hospital.	Invalided.	Ratio per 1,000 of Strength.					
							Average constantly Sick.	Admitted.	Died (in and out).	Invalided.	Average of previous Period of 10 Years.	
											Admitted.	Died.
Estern District	Madras and Palaveram.	738	39	818	8	29	52·85	1108·40	10·84	39·30	1361·44	15·30
	St. Thomas' Mount	376	24	383	5	18	63·82	1018·61	13·29	47·87	1309·10	15·83
	Total -	1,114	63	1,201	13	47	56·55	1078·09	11·67	42·19	—	—
Western District	Cannanore -	712	33	611	3	28	46·34	858·14	4·21	39·32	1251·82	13·01
	Calicut - -	101	4	82	—	—	39·60	811·88	—	—	1035·03	12·68
	Malliaporam -	92	5	88	—	—	54·34	956·52	—	—	809·97	11·99
	Total -	905	42	781	3	28	46·40	862·98	3·31	30·94	—	—
Bangalore Division and Ceded Districts.	Bangalore -	1,682	133	2,042	17	68	79·07	1214·03	10·10	40·43	1143·63	10·66
	Bellary - -	949	76	1,257	8	22	80·06	1324·55	8·42	23·18	1605·26	10·99
	Total -	2,631	209	3,299	25	90	79·43	1253·80	9·50	34·21	—	—
Hyderabad Subsidiary Force and Hyderabad Contingent.	Secunderabad -	2,541	142	2,264	24	57	55·88	890·98	9·44	22·43	1240·84	15·94
Nagpore Force and Central India Regiments.	Kamptee - -	786	47	967	7	27	59·79	1255·72	8·90	34·35	1626·08	17·87
	Seetabuldee -	49	1	45	—	—	20·40	918·36	—	—	1834·19	6·16
	Total -	835	48	1,032	7	27	57·48	1235·92	8·38	32·34	—	—

ABSTRACT No. XXIV.—*continued.*

Divisions.	Stations.	Average Strength.	Average constantly Sick.	Admitted.	Died in and out of Hospital.	Invalided.	Ratio per 1,000 of Strength.					
							Average constantly Sick.	Admitted.	Died (in and out).	Invalided.	Average of previous Period of 10 Years. Admitted.	Died
British Burmah Division.	Rangoon	671	50	769	8	28	74·51	1146·05	11·92	41·73	1276·50	15·01
	Thayetmyo	662	35	631	7	5	52·87	953·17	10·57	7·55	1060·57	16·16
	Toungoo	417	29	519	4	—	69·54	1244·60	9·59	—	930·59	14·38
	Port Blair	139	5	100	—	—	35·97	719·42	—	—	855·70	8·06
	Total	1,889	119	2,019	19	33	62·99	1068·81	10·05	17·47	—	—
Depôts	Poonamallee	137	30	216	6	24	218·97	1576·64	43·79	175·18	2291·53	55·80
	Wellington	556	39	628	6	15	70·14	1129·49	10·79	26·98	1245·11	16·95
	Total	693	69	844	12	39	99·56	1217·89	17·31	56·28	—	—
Marching	On the march	209	3	124	11	—	14·35	593·30	52·63	—	534 46	42·27

[illegible] TABLE, taken from the REPORT of the PRINCIPAL MEDICAL [illegible] of the MILITARY DIVISIONS in the MADRAS

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

OFFICER, showing the PREVALENCE and MORTALITY of the different Classes of DISEASES COMMAND, with the Ratios per 1,000 of the Strength.

Eastern District.		Western District.		Bangalore Division and Ceded Districts.		H. S. F. and Hyderabad Contingent.		Nagpore Force and Central India Regiments.		British Burmah Division.		Depôts.		On the March.		Total.	
Ratio per 1,000 of Mean Strength.																	
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
0·90	—	—	—	1·90	—	0·40	—	3·59	—	1·06	—	—	—	—	—	1·11	—
161·58	3·59	24·31	—	26·22	3·42	27·15	2·36	17·96	1·20	101·11	0·53	15·87	2·89	4·79	—	51·59	2·13
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21·54	—	26·52	—	139·11	0·38	58·64	—	483·83	1·20	88·40	0·53	314·57	—	86·12	—	126·65	0·28
0·90	0·90	—	—	0·38	0·38	0·79	0·79	—	—	—	—	—	—	52·63	23·92	1·39	0·83
0·90	—	3·81	—	1·14	0·38	1·18	—	—	—	0·53	—	1·44	—	—	—	1·10	0·09
185·82	4·49	54·14	—	168·76	4·56	88·15	3·15	505·39	2·39	191·10	1·06	331·89	2·89	143·54	23·92	181·84	3·33
11·67	—	41·99	—	38·01	—	22·03	—	32·34	—	30·17	—	50·51	—	9·57	—	30·32	—
146·11	—	74·03	—	200·63	—	55·10	—	22·75	—	102·17	—	75·04	—	110·05	—	109·74	—
7·18	—	17·68	—	23·18	—	37·39	—	22·75	—	14·82	—	33·19	—	4·78	—	23·20	—
4·49	0·90	1·10	—	4·18	—	4·33	0·40	5·99	—	7·93	0·53	25·97	4·32	4·78	—	6·19	0·56
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	2·21	—	1·52	0·38	1·57	—	17·96	—	0·53	—	1·44	—	4·78	4·78	2·59	0·18
171·45	0·90	137·02	—	267·58	0·38	120·42	0·40	101·80	—	155·63	0·53	186·15	4·32	133·97	4·78	172·04	0·74
11·67	2·69	15·47	1·10	15·20	1·52	11·41	0·40	21·56	1·20	13·77	1·06	7·22	—	19·14	14·36	13·77	1·39
10·77	—	9·95	—	18·62	—	12·99	—	19·16	—	14·83	—	7·22	—	—	—	14·05	—
17·05	—	19·89	—	9·88	—	6·69	—	4·79	—	17·47	—	2·88	—	—	—	11·00	—
—	—	—	—	0·76	—	1·57	—	1·20	—	—	—	—	—	—	—	0·65	—
16·16	1·80	49·72	1·10	25·47	1·14	12·59	0·79	16·77	—	16·41	0·53	34·63	—	—	—	21·36	0·83
47·58	—	22·10	—	36·11	—	27·16	—	9·58	—	18·52	—	33·19	—	9·57	—	28·20	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15·26	—	27·63	—	49·41	—	17·32	—	41·92	2·39	33·35	0·53	27·42	—	—	—	30·79	0·28
165·17	1·80	188·95	—	241·35	1·14	202·68	1·57	161·68	—	304·39	5·82	268·39	5·77	138·75	9·57	224·65	2·41
145·48	—	62·96	—	127·33	—	150·73	—	104·19	—	56·64	—	62·05	—	43·06	—	109·37	—
11·67	—	16·57	—	8·74	—	23·62	—	21·56	—	9·53	—	8·66	—	—	—	14·14	—
5·38	—	9·95	—	15·58	—	5·90	—	4·79	—	3·71	—	4·33	—	—	—	7·86	—
28·72	—	16·58	—	18·63	—	12·20	—	15·56	—	18·00	—	17·32	—	4·78	—	17·29	—
8·08	—	5·52	—	5·70	—	7·87	—	4·79	—	4·76	—	7·21	—	4·78	—	6·28	—
15·26	—	25·41	—	21·39	—	9·05	—	16·77	—	12·71	—	28·86	—	—	—	16·36	—
97·85	—	82·87	—	71·08	—	57·46	—	68·26	—	84·17	—	57·72	—	14·36	—	71·74	—
14·36	—	21·00	—	15·20	—	14·95	—	15·56	—	24·88	—	41·85	—	19·14	—	19·04	—
4·49	—	1·10	—	2·28	—	3·15	0·40	7·19	—	1·06	—	—	—	4·78	—	2·68	0·09
0·90	—	—	1·10	—	—	—	0·79	—	—	—	—	—	1·44	—	—	0·09	0·37
96·05	—	95·03	—	133·79	0·76	104·29	1·96	91·02	2·39	85·23	0·53	89·47	2·89	57·42	—	103·63	1·10
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8·98	—	1·10	—	1·14	—	0·79	—	2·40	—	2·65	—	1·44	—	—	—	2·22	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1078·09	11·67	862·98	3·51	1253·90	9·50	890·99	9·44	1235·93	8·38	1068·82	10·05	1217·89	17·30	593·30	52·63	1069·06	10·54

ABSTRACT No. XXVI.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the STATIONS in the MADRAS COMMAND at which the ADMISSIONS and DEATHS from ENTERIC FEVER took place in each of the four quarters of the year 1882.

Divisions.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Eastern District	Madras	—	—	—	—	2	1	—	1	2	2
	St. Thomas Mount.	2	1	1	1	—	—	—	—	3	2
Western District	Cannnnore	—	—	—	—	1	—	—	—	1	—
	Calicut	—	—	—	—	—	—	1	—	1	—
Bangalore Division and Ceded District	Bangalore	—	—	4	4	2	—	13	3	19	7
	Bellary	—	—	1	—	4	2	1	—	6	2
	Wellington	—	—	2	2	—	—	1	—	3	2
Hyderabad Subsidiary Force and Hyderabad Contingent.	Secunderabad	1	1	2	2	1	1	4	2	8	6
Nagpore Force and Central India Regiments.	Kamptee	—	—	—	—	—	—	1	1	1	1
British Burmah Division	Rangoon	1	—	—	—	1	—	—	—	2	—
	Thayetmyo	—	—	1	1	—	—	—	—	1	1
	Total	4	2	11	10	11	4	21	7	47	23

ABSTRACT No. XXVII.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the STATIONS in the MADRAS COMMAND at which the ADMISSIONS and DEATHS from CHOLERA took place in each of the four quarters of the year 1882.

Divisions.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Eastern District	Madras	1	1	—	—	—	—	—	—	1	1
Bangalore Division and Ceded District.	Bellary	—	—	—	—	—	—	1	1	1	1
Hyderabad Subsidiary Force and Hyderabad Contingent.	Secunderabad	—	—	—	—	1	1	1	1	2	2
Marching	On the march	4	1	—	—	—	—	7	4	11	5
	Total	5	2	—	—	1	1	9	6	15	9

ABSTRACT No. XXVIII.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the prevalence of DYSENTERY, DIARRHŒA, and HEPATITIS in each of the DIVISIONS in the MADRAS COMMAND for 1882 :—

Circles.	Eastern District.		Western District.		Bangalore Division and Ceded Districts.		H. S. F. and Hyderabad Contingent.		Nagpore Force and Central India Regiments.		British Burmah Division.		On the March.		Total.	
Strength.	1,251		905		3,187		2,541		835		1,889		209		10,817	
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Dysentery	91	2	30	—	99	—	118	1	17	—	185	2	4	—	544	5
Diarrhœa	31	—	28	—	179	1	75	—	22	—	75	—	14	1	424	2
Hepatitis and Abscess of Liver	42	4	8	—	89	2	59	3	13	—	115	8	7	1	333	18
Total	164	6	66	—	367	3	252	4	52	—	375	10	25	2	1,301	25
Ratio per 1,000 of Strength.																
Dysentery	72·74	1·60	33·15	—	31·06	—	46·44	0·39	20·36	—	97·94	1·06	19·14	—	50·29	0·46
Diarrhœa	24·78	—	30·94	—	56·16	0·31	29·51	—	26·35	—	39·70	—	66·98	4·78	39·20	0·19
Hepatitis and Abscess of Liver	33·57	3·20	8·84	—	27·93	0·63	23·22	1·18	15·57	—	60·88	4·23	33·49	4·78	30·78	1·66
Total	131·09	4·80	72·93	—	115·15	0·94	99·17	1·57	62·28	—	198·52	5·29	119·61	9·56	120·27	2·31

ABSTRACT No. XXIX.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the PREVALENCE and MORTALITY in the MADRAS COMMAND, due to DYSENTERY, DIARRHŒA, and HEPATITIS, in each Quarter of the Year 1882.

—	Strength.	Dysentery.				Diarrhœa.				Hepatitis (including Abscess of the Liver).				Total.			
		Number.		Ratio per 1,000 of the Strength.		Number.		Ratio per 1,000 of the Strength.		Number.		Ratio per 1,000 of the Strength.		Number.		Ratio per 1,000 of the Strength.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
1st Quarter -	10,284	92	1	8·95	0·10	94	1	9·14	0·10	93	7	9·04	0·68	279	9	27·13	0·88
2nd „ -	11,129	159	1	14·29	0·09	126	1	11·32	0·09	73	4	6·56	0·36	358	6	32·17	0·54
3rd „ -	11,036	185	2	16·76	0·18	119	—	10·78	—	87	4	7·88	0·36	391	6	35·42	0·54
4th „ -	10,822	108	1	9·98	0·09	85	—	7·85	—	80	3	7·39	0·28	273	4	25·22	0·37
Total for the Year -	10,817	544	5	50·29	0·46	424	2	39·20	0·19	333	18	30·78	1·66	1,301	25	120·27	2·31

ABSTRACT No. XXX.—TABLE showing the ADMISSIONS, MORTALITY, and INVALIDING in each CORPS serving in the MADRAS COMMAND, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER.

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Sick to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year,
						Admissions into Hospital.	Deaths in the Command.	Invalids.	Average Constantly Sick.	Average Time		
												months.
CAVALRY.												
12th Lancers - - -	406	654	3	10	28	1610·83	7·39	24·63	68·96	25·17	15·62	Secunderabad, 2¼, and Bangalore, 9¾ - - - 12
14th Hussars - - -	391	343	8	11	17	877·24	20·46	28·13	43·47	15·87	18·09	Secunderabad - - - - - - 11¼
Total - - -	797	997	11	21	45	1250·94	13·80	26·35	56·46	20·61	16·47	
ROYAL ARTILLERY.												
E/B Bde. Royal Horse Artillery	134	186	1	2	10	1388·06	7·46	14·92	74·62	27·24	19·63	On the march, 2, and Bangalore, 9¾ - - - 11¼
M/B „ late B/C Bde. „	151	289	2	13	11	1913·91	13·24	86·09	72·85	26·58	13·89	Secunderabad - - - - - - 12
L/1st „ Royal Artillery -	153	194	1	8	8	1267·97	6·53	52·29	52·29	19·08	15·05	Secunderabad - - - - - - 12
O/1st „ „ -	159	153	2	9	8	962·26	12·58	55·60	50·31	18·36	19·09	St. Thomas Mount, 11½; and on the march, ¾.
P/1 „ late N/6 Bde. R.A. -	154	189	4	6	10	1227·27	25·97	38·96	64·93	23·70	19·31	Secunderabad - - - - - - 12
Q/1 „ „ K/6 „ „ -	157	176	—	2	10	1121·02	—	12·74	63·69	23·25	20·74	Bangalore - - - - - - - 12
R/1 „ „ L/6 „ „ -	138	212	2	3	13	1536·23	14·49	21·74	94·20	34·38	23·38	Kamptee, 2¾, and Bellary, 9¼.
S/1 „ „ M/6 „ „ -	148	243	4	3	8	1641·89	27·03	20·27	54·05	19·73	12·02	Kamptee, 9¼, and on the march, 2¾.
M/2 „ „ I/6 „ „ -	151	103	3	8	8	682·12	19·87	52·98	52·98	19·34	28·35	St. Thomas' Mount - - - - - 12
I/3 „ „ -	162	271	—	8	18	1672·84	—	49·38	111·11	40·55	24·24	Bangalore - - - - - - - 12

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Sick to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.
						Admissions into Hospital.	Deaths in the Command.	Invalids.	Average Constantly Sick.	Average Time		
												months.
7/1 Eastern Div., late 7/9 „ R.A.	97	110	1	3	7	1134·02	10·31	33·98	72·16	26·34	23·23	Thayetmyo - - - - - - - 12
9/1 „ „ 4/9 „ -	98	113	2	—	7	1153·06	20·40	—	71·43	26·07	22·61	Toungoo - - - - - - - 12
4/1 Welsh Div. „ 4/8 „ -	89	116	—	7	5	1303·37	—	78·65	56·18	20·51	15·73	Secunderabad - - - - - - 12
5/1 „ „ 7/8 „ -	118	158	2	2	7	1338·98	16·95	16·95	59·32	21·65	16·17	St. Thomas' Mount and Madras - - - 12
4/1 North Irish Div. „ 9/9 „ -	99	147	3	5	10	1484·85	30·30	50·50	101·01	36·87	24·83	Rangoon - - - - - - - 12
8/1 Eastern Div. „ 16/9 „ -	96	66	1	—	3	687·50	10·42	—	31·25	11·41	16·59	Thayetmyo - - - - - - - 12
B/B Bde., R.H.A. - -	8	5	—	—	—	625·00	—	—	—	—	—	Bangalore, ¾, and embarked for England 27 Jan. 1882
C/B „ „ - -	11	24	—	—	1	2181·82	—	—	90·90	33·18	15·21	Secunderabad, ¾ do. do.
C/6 „ R.A. - - -	3	1	—	—	—	333·33	—	—	—	—	—	Bellary, ¼, and left the Command for Poona 12 Jan. 1882
Q/8 „ „ - - -	4	4	—	—	—	1000·00	—	—	—	—	—	Secunderabad, 3 do. Gwalior do.
Hd.-Qrs. 9th Bde. R.A. -	7	24	—	—	1	3428·57	—	—	142·85	52·14	15·21	St. Thomas' Mount - - - - - 12
3/8 „ „ -	13	3	—	1	—	230·77	—	76·92	—	—	—	Toungoo, ¼, and left the Command for Attock, 21 Jan. 1882.
Details, R.A. - - -	14	6	—	1	—	428·57	—	71·43	—	—	—	
Total - -	2,164	2,793	28	81	145	1290·66	12·94	37·43	67·01	24·46	18·95	
42nd Coy., Royal Engineers -	52	20	1	—	1	384·61	19·23	—	19·23	7·02	18·25	Bangalore - - - - - - - 12

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.
						Admissions into Hospital.	Deaths in the Command.	Invalids.	Average Constantly Sick.			
INFANTRY.												months.
2nd Bn. Rl. Fusiliers C. L. Regiment.	821	1,052	7	20	62	1281·36	8·52	24·36	75·51	27·56	21·51	Bellary - - - - - - - 13
2nd Bn. Somersetshire Regt., P.A.L.I.	721	836	7	30	34	1159·50	9·70	41·61	47·15	17·21	14·84	Kamptee, and detachment at Sectabuldu - - 12
Hd.-Qrs. 2nd Bn. Bedfordshire Regiment.	540	545	4	28	28	1009·25	7·40	51·85	51·85	18·93	18·75	Thayetmyo - - - - - - - 12
Left Wing 2nd Bn. Bedfordshire Regiment.	288	386	3	—	19	1340·29	10·41	—	65·97	24·08	17·96	Toungoo - - - - - - - 12
2nd Bn. Royal Scots Fusiliers	796	545	3	9	36	684·67	3·76	11·31	45·22	16·51	24·11	Secunderabad, 11; arrived from Natal 1st Feb. 1882
2nd Bn. South Wales Borderers.	787	517	7	4	41	656·92	8·89	5·08	52·09	19·02	28·94	Secunderabad - - - - - - 12
1st Bn. Oxfordshire Regiment	823	738	14	42	60	896·71	17·01	51·03	72·90	26·61	29·67	On the march, ½, and Bangalore, 11½.
1st Bn. Essex „	754	827	5	22	39	1096·81	6·63	29·17	51·72	18·88	17·21	Madras, and detachment at Malliaporam - - 12
2nd Bn. Hampshire „	854	724	5	32	36	847·77	5·85	37·47	42·15	15·39	18·15	Cannanore and detachment at Calicut - - 12
2nd Bn. Middlesex „	695	691	5	32	32	994·24	7·19	46·04	46·04	16·81	16·90	Rangoon and detachment at Port Blair - - 12
Details, Infantry Regiments -	32	49	2	—	2	1531·25	62·50	—	62·50	34·22	22·34	
H.M.'s Depôt - - -	137	216	6	—	27	1576·64	43·79	—	197·08	71·93	45·62	Poonamallee - - - - - -
„ - - - -	556	628	6	—	35	1129·49	10·79	—	62·94	22·98	20·34	Wellington - - - - - - -
Total - -	7,804	7,754	74	219	451	993·59	9·49	28·06	57·79	21·12	21·24	
Grand Total - -	10,817	11,564	114	321	642	1069·06	10·54	29·67	59·34	—	—	

ABSTRACT No. XXXI.—The following TABLE taken from the REPORT of the for the YEAR under REPORT

Years.	Average Strength.			Number of Deaths.		
	Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.
1872 - - -	430	1,723	10,021	7	51	166
1873 - - -	422	1,785	10,181	6	24	187
1874 - - -	419	1,785	10,215	3	27	122
1875 - - -	398	1,698	9,779	11	32	131
1876 - - -	405	1,670	9,671	7	31	143
1877 - - -	454	1,700	9,641	6	46	142
1878 - - -	442	1,665	9,491	9	55	178
1879 - - -	433	1,660	9,744	3	33	140
1880 - - -	473	1,611	9,508	5	8	92
1881 - - -	425	1,555	9,108	4	21	93
Average for 10 years -	430	1,685	9,735	6	32	139
1882 - - -	525	1,205	10,001	3	19	95

PRINCIPAL MEDICAL OFFICER of MADRAS, shows the comparative MORTALITY and for the TEN previous YEARS.

Invalided.			Ratio per 1,000 of Strength.					
			Deaths.			Invalids.		
Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.
37	44	392	16·28	29·60	16·56	86·05	26·12	39·11
37	42	367	14·22	13·44	18·37	87·68	23·53	36·05
33	48	555	7·16	15·12	11·94	78·76	26·89	54·83
38	61	532	27·64	18·84	13·39	95·48	35·92	54·89
34	65	413	17·28	18·56	14·79	83·95	38·92	42·70
33	63	447	13·22	27·05	14·73	72·69	37·59	46·35
29	57	441	20·36	33·03	18·75	65·61	34·23	46·46
26	62	405	6·93	19·88	14·36	60·05	37·35	41·56
40	12	226	10·57	4·96	9·68	84·56	7·45	23·78
24	33	253	9·41	13·51	10·21	56·47	21·22	27·78
33	48	403	13·95	18·99	14·28	76·74	28·48	41·39
27	44	277	5·71	15·77	9·49	51·43	36·51	27·70

ABSTRACT No. XXXII.—TABLE showing the ADMISSIONS into HOSPITAL, in the BOMBAY PRESIDENCY during the Year 1882, with the Ratios per

Orders.	Average Strength, 10,197. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
	I.—*General Diseases.* *Febrile Group.*							
	Eruptive Fevers { Small-pox	—	—	—	—	—	—	—
	Eruptive Fevers { Other	19	—	—	—	—	—	1·30
	Continued „ { Enteric	43	18	—	18	1	—	5·33
	Continued „ { Other	769	1	—	1	1	—	22·86
	Yellow Fever	—	—	—	—	—	—	—
	Paroxysmal Fevers	5,083	10	—	10	14	1	128·74
	Cholera	10	7	—	7	—	—	·25
	Other diseases	34	2	—	2	—	—	1·58
	Total	5,958	38	—	38	16	1	160·06
	Constitutional Group.							
	Rheumatism	358	2	—	2	8	1	20·62
	Primary Syphilis	706	—	—	—	—	—	54·49
	Secondary „	254	—	—	—	11	6	20·79
	Tubercular diseases	62	5	3	8	24	17	8·12
	Scurvy and Purpura	4	—	—	—	—	—	·18
	Other diseases	25	1	—	1	3	2	1·87
	Total	1,409	8	3	11	46	26	106·07
	II.—*Local Diseases.* Diseases of the—							
1	Nervous System	170	8	—	8	41	8	13·04
2	Eye	152	—	—	—	8	8	8·49
3	Ear	134	—	—	—	9	9	6·13
4	Nose	1	—	—	—	—	—	·08
5	Circulatory System	195	6	—	6	48	36	18·02
6	Absorbent „	209	—	—	—	—	—	23·14
7	Ductless Glands	1	—	—	—	1	1	·03
8	Respiratory System	462	8	—	8	16	15	25·64
9	Digestive „	1,863	12	1	13	44	13	74·19
10	Urinary System { Gonorrhœa	899	—	—	—	—	—	58·96
10	Urinary System { Sequelæ of Gonorr.	181	—	—	—	—	1	12·51
10	Urinary System { Other diseases	94	—	—	—	6	—	5·14
11	Generative System	122	—	—	—	4	2	6·96
12	Organs of Locomotion	51	1	—	1	5	4	2·20
13	Cellular Tissue	193	—	—	—	—	2	8·29
14	Cutaneous System	685	—	—	—	3	2	28·55
	III.—*Debility*	382	—	—	—	100	12	24·57
	IV.—*Poisons*	40	2	—	2	—	—	·92
	V.—*Injuries.*							
1	General	8	10	—	10	—	—	·13
2	Local	1,125	13	—	13	11	9	43·49
3	In action	—	—	—	—	—	—	—
	No appreciable disease	9	—	—	—	—	—	·25
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—
	General Total	14,338	106	4	110	358	149	626·86
	Average for 10 years, 1872–81	—	—	—	—	—	—	—

* The average ratios for 10 years will be given in future years. The average ratios for the four years 1879

DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS stationed 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000, from 1879 to 1881.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	} ·8	·03	—	—	·04
1·9	—	—	—	·13					
4·2	1·77	·10	—	·52	} 156·3	2·61	·10	—	4·11
75·4	·10	·10	—	2·23					
—	—	—	—	—	—	—	—	—	—
498·5	·98	1·37	·10	12·63	898·1	2·30	11·14	·03	19·85
1·0	·69	—	—	·02	·3	·21	—	—	·01
3·3	·19	—	—	·16	5·7	·21	—	·03	·22
584·3	3·73	1·57	·10	15·69	1061·1	5·36	11·24	·07	24·23
35·1	·19	·79	·10	2·02	35·3	·17	1·99	·58	1·62
69·2	—	—	—	5·34	96·0	·03	—	—	6·40
24·9	—	1·08	·59	2·04	22·5	—	1·48	·82	1·48
6·1	·79	2·35	1·67	·80	7·8	1·38	2·82	2·48	·70
·4	—	—	—	·02	1·7	·03	—	—	·08
2·5	·10	·29	·19	·18	5·0	·10	·62	·24	·35
138·2	1·08	4·51	2·55	10·40	168·3	1·72	6·91	4·12	10·63
16·7	·79	4·02	·79	1·28	14·9	2·20	2·30	·79	·87
14·9	—	·79	·79	·83	15·4	—	·62	·89	·74
13·1	—	·88	·88	·60	9·3	—	·34	·52	·32
·1	—	—	—	·01	1·0	—	—	—	·05
19·1	·59	4·71	3·53	1·77	13·0	·69	3·40	3·51	·84
20·5	—	—	—	2·27	24·2	—	—	—	1·76
·1	—	·10	·10	—	·2	—	—	—	·09
45·2	·79	1·57	1·47	2·52	57·1	1·99	1·13	·79	2·57
182·7	1·27	4·31	1·27	7·28	231·5	4·68	8·42	2·78	8·34
88·2	—	—	—	5·78	101·5	—	—	—	5·59
17·8	—	—	·10	1·23	15·3	—	·10	·10	·86
9·2	—	·59	—	·50	10·5	·34	·41	·31	·56
12·0	—	·39	·19	·68	10·4	—	·14	·21	·41
5·0	·10	·49	·39	·22	3·4	·07	·34	·58	·25
18·9	—	—	·19	·81	18·8	·03	·07	·03	·81
67·2	—	·29	·19	2·80	73·3	—	·24	·28	2·62
37·5	—	9·81	1·18	2·41	48·6	·10	18·26	4·85	2·13
3·9	·19	—	—	·09	6·4	·14	—	—	·14
·3	·98	—	—	·01	·4	·58	—	—	·02
110·3	1·27	1·08	·88	4·27	99·8	·83	·69	·62	3·19
—	—	—	—	—	·3	—	·31	—	·03
·9	—	—	—	·02	1·4	—	—	—	·06
—	—	—	—	—	—	—	—	—	—
1406·1	10·79	35·11	14·61	61·47	1986·1	18·78	54·98	20·45	67·11
1580·7	17·00	48·60	15·94	57·73	—	—	—	—	—

to 1882 will be given in the Report for 1883, those for the five years 1879 to 1883 in that for 1884, &c., &c.

ABSTRACT No. XXXIII.—The following TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, shows the ADMISSIONS and DEATHS in the PRINCIPAL STATIONS in the BOMBAY COMMAND.

Administrative Circles.	Stations.	Annual Average Strength.	Number of Admissions.	Number of Deaths.	Ratio per 1,000 of the Strength.			
					Admissions.	Deaths.	Average of 10 Years, 1872–81. Admissions.	Deaths.
Presidency	Bombay	784	949	11	1210·4	14·03	2027·8	20·05
	Deolalee	390	331	10	848·7	25·64	1501·3	18·14
	Belgaum	812	824	7	1014·8	8·62	1133·2	7·24
	Aden	779	754	16	967·9	20·54	1068·4	14·64
Sind	Karachi	798	1,989	3	2492·5	3·76	1793·2	18·89
	Hyderabad	375	478	2	1274·6	5·33	1626·8	12·29
Poona	Poona	1,061	920	3	867·1	2·83	1714·5	13·17
	Kirkee	647	689	2	1064·9	3·09	1607·4	12·33
	Ahmednugger	472	647	1	1370·8	2·12	1522·0	14·44
	Satara	188	199	1	1442·0	7·25	1371·3	7·33
	Kolhapur	100	136	1	1360·0	10·00	1456·1	17·54
	Khandalla	90	108	1	1200·0	11·11	2203·6	18·61
Mhow	Mhow	1,350	2,124	9	1573·3	6·67	1760·5	11·23
	Indore	101	251	3	2485·1	29·70	1874·5	17·37
	Asseergurh	123	118	3	959·3	24·39	1816·5	13·91
	Neemuch	434	1,264	7	2912·4	16·13	2130·7	26·96
	Nusseerabad	668	907	16	1357·8	23·94	1744·3	23·06
	Deesa	235	341	1	1451·4	4·26	1503·6	17·60
	Ahmedabad	176	217	3	1233·0	17·05	2168·7	23·12
	Baroda	210	503	2	2395·2	9·52	2390·4	26·87
	Sanitaria	204	459	3	2250·0	14·71	1686·3	35·34
	On March	250	130	1	520·0	4·00	988·7	11·93
	Total	10197	14338	106	1406·1	10·40	—	—

ABSTRACTS XXXIV. to XLV.

ABSTRACT No. XXXIV.—TABLE taken from the REPORT of the PRINCIPAL Different Classes of DISEASES in each of the ADMINISTRATIVE CIRCLES in

Orders.	Military Divisions	Presidency.		Sind.		Poona.		Mhow.		Troops on March.		Convalescents and Invalids.		Total.	
	Average Strength	2,765		1,173		2,508		3,297		250		204		10,197	
	Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
	I. *General Diseases.*														
	Febrile Group.														
	Eruptive Fevers	2	—	—	—	16	—	1	—	—	—	—	—	19	—
	Continued "	186	8	147	1	160	—	312	10	1	—	6	—	812	19
	Yellow Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Paroxysmal Fevers	653	3	1,474	—	548	2	2,244	4	30	—	134	1	5,083	10
	Cholera	2	—	—	—	—	—	8	7	—	—	—	—	10	7
	Other diseases	4	—	3	1	19	1	7	—	—	—	1	—	34	2
	Total of febrile group	847	11	1,624	2	743	3	2,572	21	31	—	141	1	5,958	38
	Constitutional Group.														
	Rheumatism	86	1	36	—	89	1	119	—	3	—	25	—	358	2
	Primary Syphilis	163	—	72	—	196	—	251	—	19	—	5	—	706	—
	Secondary "	65	—	26	—	61	—	87	—	3	—	12	—	254	—
	Tubercular diseases	24	3	—	—	11	1	22	—	—	—	5	1	62	5
	Scurvy and Purpura	1	—	1	—	—	—	2	—	—	—	—	—	4	—
	Other diseases	8	1	—	—	8	—	6	—	1	—	2	—	25	1
	Total of constitutional group.	347	5	135	—	365	2	487	—	26	—	49	1	1,409	8
	II. *Local Diseases.*														
	Diseases of the—														
1	Nervous System	46	3	12	1	40	—	53	3	4	1	15	—	170	8
2	Eye	44	—	16	—	27	—	58	—	—	—	7	—	152	—
3	Ear	24	—	17	—	26	—	65	—	—	—	2	—	134	—
4	Nose	1	—	—	—	—	—	—	—	—	—	—	—	1	—
5	Circulatory System	31	3	8	—	59	—	82	3	2	—	13	—	195	6
6	Absorbent "	63	—	17	—	26	—	76	—	7	—	20	—	209	—
7	Ductless Glands	—	—	—	—	—	—	1	—	—	—	—	—	1	—
8	Respiratory System	96	5	35	—	119	1	178	2	5	—	29	—	462	8
9	Digestive "	460	7	204	1	419	—	681	3	16	—	83	1	1,963	12
10	Urinary System. Gonorrhœa	225	—	92	—	247	—	312	—	8	—	15	—	899	—
	Urinary System. Sequelæ of Gon.	36	—	20	—	30	—	90	—	1	—	4	—	181	—
	Urinary System. Other diseases	24	—	13	—	12	—	41	—	1	—	3	—	94	—
11	Generative System	30	—	13	—	27	—	47	—	4	—	1	—	122	—
12	Organs of Locomotion	10	—	2	—	23	—	15	1	1	—	—	—	51	1
13	Cellular Tissue	61	—	23	—	62	—	45	—	2	—	2	—	193	—
14	Cutaneous System	168	—	71	—	156	—	270	—	3	—	17	—	685	—
	III. *Debility*	51	—	45	—	49	—	189	—	5	—	43	—	382	—
	IV. *Poisons*	11	1	6	—	10	—	12	1	—	—	1	—	40	2
	V. *Injuries.*														
1	General	—	6	—	—	—	2	3	2	—	—	—	—	3	10
2	Local	290	5	112	1	257	1	448	8	14	—	14	—	1,125	13
3	In action	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	No appreciable disease	3	—	2	—	2	—	2	—	—	—	—	—	9	—
	Cause unknown (refers to deaths only).	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	2,858	44	2,467	5	2,699	9	5,725	44	130	1	459	3	14,338	106

MEDICAL OFFICER, showing the PREVALENCE and MORTALITY of the the BOMBAY COMMAND, with the Ratios per 1,000 of the Strength.

Presidency.		Sind.		Poona.		Mhow.		Troops on March.		Convalescents and Invalids.		Total.	
Ratio per 1,000 of mean Strength.													
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
·7	—	—	—	6·4	—	·3	—	—	—	—	—	1·9	—
67·2	2·89	125·3	·85	63·8	—	94·6	3·03	4·0	—	29·4	—	79·6	1·87
—	—	—	—	—	—	—	—	—	—	—	—	—	—
226·2	1·08	1256·6	—	218·5	·79	690·6	1·21	120·0	—	656·0	4·90	498·5	·98
7	—	—	—	—	—	2·4	2·12	—	—	—	—	1·0	·69
1·4	—	2·6	·85	7·6	·40	2·1	—	—	—	4·9	—	3·3	·20
306·3	3·98	1384·5	1·70	296·3	1·19	780·1	6·36	124·0	—	691·2	4·90	584·3	3·73
31·1	·36	30·6	—	35·5	·40	36·1	—	12·0	—	122·5	—	35·1	·20
59·0	—	61·4	—	78·1	—	76·1	—	76·0	—	24·5	—	69·2	—
23·5	—	22·2	—	24·3	—	26·4	—	12·0	—	58·8	—	24·9	—
8·7	1·08	—	—	4·4	·40	6·7	—	—	—	24·5	4·99	6·1	·49
·4	—	·9	—	—	—	·6	—	—	—	—	—	·4	—
2·9	·36	—	—	3·2	—	1·8	—	4·0	—	9·8	—	2·3	·10
125·5	1·81	115·1	—	145·5	·80	147·7	—	104·0	—	240·2	4·90	138·2	·78
16·6	1·08	10·2	·85	15·9	—	16·1	·92	16·0	4·00	73·5	—	16·7	·78
15·9	—	13·6	—	10·8	—	17·5	—	—	—	34·3	—	14·9	—
8·7	—	14·5	—	10·4	—	19·7	—	—	—	9·8	—	13·1	—
·4	—	—	—	—	—	—	—	—	—	—	—	·1	—
11·2	1·08	6·8	—	23·5	—	24·9	·92	8·0	—	63·7	—	19·1	·59
22·8	—	14·5	—	10·4	—	23·1	—	28·0	—	98·0	—	20·5	—
—	—	—	—	—	—	·3	—	—	—	—	—	·1	—
34·7	1·81	29·8	—	47·4	·40	54·0	·61	20·0	—	142·2	—	45·3	·78
166·4	2·53	174·0	·85	167·1	—	206·6	·92	64·0	—	406·9	4·90	182·7	1·18
81·4	—	78·4	—	98·5	—	94·6	—	32·0	—	73·5	—	88·2	—
13·0	—	17·1	—	12·0	—	27·3	—	4·0	—	19·6	—	17·8	—
8·7	—	11·1	—	4·8	—	12·4	—	4·0	—	14·7	—	9·2	—
10·8	—	11·1	—	10·8	—	14·3	—	16·0	—	4·9	—	12·0	—
3·6	—	1·7	—	9·2	—	4·5	·30	4·0	—	—	—	5·0	·10
22·1	—	19·6	—	24·7	—	13·0	—	8·0	—	9·8	—	18·9	—
60·8	—	60·5	—	62·2	—	81·9	—	12·0	—	83·3	—	67·2	—
18·4	—	38·4	—	19·5	—	57·3	—	20·0	—	210·8	—	37·5	—
4·0	·36	5·1	—	4·0	—	3·6	·30	—	—	4·9	—	3·9	·20
—	2·17	—	—	—	·79	·9	·61	—	—	—	—	·3	·98
101·3	1·08	95·5	·85	102·4	·40	135·9	2·43	56·0	—	69·6	—	110·3	1·27
—	—	—	—	—	—	—	—	—	—	—	—	—	—
1·1	—	1·7	—	·8	—	·6	—	—	—	—	—	·9	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
1033·6	15·91	2103·2	4·25	1076·2	3·58	1736·4	13·35	520·0	4·00	2250·0	14·71	1406·1	10·49

ABSTRACT No. XXXV.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the STATIONS in the BOMBAY COMMAND at which the ADMISSIONS and DEATHS from ENTERIC FEVER took place in each of the four quarters of the Year 1882.

Circles.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Presidency	Bombay	—	1	—	—	—	—	9	3	9	4
	Belgaum	2	1	—	1	—	—	—	—	2	2
	Aden	1	1	—	—	—	—	—	—	1	1
Sind	Kurrachee	6	1	—	—	1	—	—	—	7	1
Poona	Poona	1	—	—	—	—	—	—	—	1	—
	Ahmednuggur	—	—	1	—	—	—	—	—	1	—
Mhow	Mhow	—	—	—	—	1	—	1	1	2	1
	Nusseerabad	1	1	1	1	3	1	8	5	13	8
	Indore	—	—	1	—	—	—	—	—	1	—
	Neemuch	—	—	—	—	6	1	—	—	6	1
	Total	11	5	3	2	11	2	18	9	43	18

ABSTRACT No. XXXVI.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the STATIONS in the BOMBAY COMMAND at which the ADMISSIONS and DEATHS from CHOLERA took place in each of the four quarters of the Year 1882.

Circles.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Presidency	Deolalee	—	—	—	—	2	—	—	—	2	—
Mhow	Nasirabad	—	—	—	—	6	5	—	—	6	5
	Neemuch	—	—	—	—	—	—	1	1	1	1
	Indore	—	—	—	—	1	1	—	—	1	1
	Total	—	—	—	—	9	6	1	1	10	7

ABSTRACT No. XXXVII.—Table taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the PREVALENCE of DYSENTERY, DIARRHŒA, and HEPATITIS in each of the ADMINISTRATIVE CIRCLES in the BOMBAY COMMAND for 1882.

Divisions.	Presidency.		Sind.		Poona.		Mhow.		On March.		Total.	
Strength.	2,765		1,244		2,594		3,364		250		10,197	
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Dysentery	51	2	16	—	34	—	32	—	—	—	133	2
Diarrhœa	111	1	92	—	88	—	181	—	7	—	479	1
Hepatitis and Abscess of Liver	60	4	20	1	50	—	52	2	2	—	184	7
Total	222	7	128	1	172	—	265	2	9	—	796	10
Ratio per 1,000 of Strength.												
Dysentery	18·4	·72	13·1	—	13·1	—	9·5	—	—	—	13·0	·20
Diarrhœa	40·1	·36	75·2	—	33·9	—	53·8	—	28·0	—	47·0	·10
Hepatitis and Abscess of Liver	21·7	1·44	16·3	·82	19·3	—	15·5	·60	8·0	—	18·0	·69
Total	80·3	2·53	104·6	·82	66·3	—	78·8	·60	36·0	—	78·1	·98

ABSTRACT No. XXXVIII.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the PREVALENCE and MORTALITY in the BOMBAY COMMAND, due to DYSENTERY, DIARRHŒA, and HEPATITIS, in each Quarter of the Year 1882.

Quarters.	Strength.	Dysentery.				Diarrhœa.				Hepatitis and Abscess of Liver.				Total.			
		Number.		Ratio per 1,000 of the Strength.		Number.		Ratio per 1,000 of the Strength.		Number.		Ratio per 1,000 of the Strength.		Number.		Ratio per 1,000 of the Strength.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
1st Quarter -	10,315	24	—	2·3	—	89	—	8·6	—	29	1	2·8	·10	142	1	13·8	·10
2nd „ -	10,113	30	1	3·0	·10	97	—	9·7	—	43	2	4·3	·20	170	3	16·8	·30
3rd „ -	9,889	51	—	5·2	—	205	1	20·7	·10	59	2	6·0	·20	315	3	31·9	·30
4th „ -	10,516	29	1	2·8	·10	93	—	8·8	—	52	2	4·9	·19	174	3	16·5	·29
Total for Year -	10,208	134	2	13·1	·20	484	1	47·4	·10	183	7	17·9	·69	801	10	78·5	·98

NOTE.—In this table, compiled from the Monthly Returns, there is one (1) admission more for dysentery and five (5) for diarrhœa, and one (1) less for hepatitis and abscess of liver.

ABSTRACT No. XXXIX.—TABLE showing the ADMISSIONS, MORTALITY and INVALIDING in each CORPS, serving in the BOMBAY COMMAND for the year 1882, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER.

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions.	Deaths.	Invalids.	Average Daily Sick.				
CAVALRY.													yrs. mo.
17th Lancers - - -	428	501	3	20	27·30	1170·6	7·01	46·73	63·78	23·27	19·89	Mhow, 12 months - - - - -	4 0
ROYAL ARTILLERY.													
D Battery, B Brigade, R.H.A.	131	202	—	6	10·66	1116·0	—	33·15	58·89	21·49	19·26	Kirkee, 11 months; Mhow, 1 month - -	10 0
I „ 1 „ R.A. -	128	207	3	10	9·96	1617·2	23·44	78·12	77·81	28·40	17·56	Ahmedabad, 11½ months - - -	13 0
M „ 1 „ „ -	147	167	—	4	6·68	1136·0	—	27·21	45·44	16·58	14·60	Nasirabad, 10 „ - - - -	5 0
N „ 1 „ „ -	160	198	1	2	7·98	1237·5	6·25	12·50	49·87	24·45	19·76	Hyderabad, 12 „ - - - -	13 0
A „ 2 „ „ -	169	159	—	4	7·48	940·8	—	23·61	44·26	16·15	17·17	Kirkee, 12 „ - - - -	8 0
B „ 2 „ „ -	120	436	2	4	15·26	3633·3	16·67	33·33	127·17	46·41	12·77	Neemuch, 9½ „ - - - -	8 0
C „ 2 „ „ -	141	126	—	12	7·26	893·6	—	85·11	51·49	18·79	21·02	Ahmednagar, 12 „ - - - -	8 0
D „ 2 „ „ -	150	152	—	7	7·49	1013·3	—	46·67	49·93	18·22	17·98	Kirkee, 12 „ - - - -	8 0
E „ 2 „ „ -	131	187	—	1	8·86	1427·5	—	7·63	67·63	24·68	17·29	Karachi, 11½ „ - - - -	7 0
F „ 2 „ „ -	141	115	1	2	5·37	815·6	7·09	14·18	38·08	13·90	17·04	Deesa, 12 „ - - - -	8 0
G „ 2 „ „ -	166	256	5	5	11·01	1542·2	30·12	30·12	66·32	24·20	15·69	Belgaum, 10½ „ - - - -	8 0
A „ 4 „ „ -	147	191	2	2	7·46	1299·3	13·60	13·60	50·75	18·52	14·25	Mhow, 10½ „ - - - -	9 0

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Daily Average Sick.	Ratio per 1,000 of Strength.				Sick each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions.	Deaths.	Invalids.	Average Daily Sick.	Average Time to			
													yrs. mo.
5 Batt., 1 Brgd., R.A., N.Ir.Dn.	111	114	—	7	4·51	1027·0	—	63·06	40·63	14·83	14·44	Mhow, 12 months - - - - -	8 0
7 „ 1 „ C.P. Dn.	87	106	3	2	5·02	1218·4	34·48	22·99	57·70	21·06	17·28	Bombay, 10½ „ - - - - -	1 0
7 „ 1 „ Scot.Dn.	104	78	2	1	2·57	750·0	19·23	9·62	24·71	9·02	12·02	Aden, 10 months; Bombay, 2 months - -	11 0
8 „ 1 „ C.P. Dn.	107	138	2	2	8·11	1289·7	18·69	18·69	75·79	27·66	21·45	Bombay, 12 months - - - - -	1 0
8 „ 1 „ Scot.Dn.	85	125	3	1	3·81	1470·6	35·29	11·76	44·82	16·35	11·12	Aden, 10 months; Bombay, 2 months - -	11 0
9 „ 1 „ C.P. Dn.	106	118	1	2	6·04	1113·2	9·43	18·87	56·98	20·79	10·20	Khandala, 9½ months; Poona, 12 „ - -	4 0
Total - -	2,381	3,075	25	74	135·53	1291·5	10·50	31·08	55·92	20·78	16·09		
Royal Engineers - - -	25	20	1	2	·65	800·0	40·00	80·00	26·00	9·48	11·85	Kirkee, 12 months - - - - -	—
INFANTRY.													
2nd Royal Lancaster Regiment	800	1,341	3	43	54·93	1676·2	3·75	53·75	68·66	25·06	14·95	Bombay, 12 months - - - - -	3 0
2nd East Yorkshire „ -	753	695	2	23	41·55	923·0	2·66	30·54	55·18	20·14	21·82	Poona, 12 „ - - - - -	8 0
2nd Lancashire Fusiliers -	859	1,613	9	17	76·12	1877·8	10·48	19·79	88·61	32·34	17·22	Mhow, 12 „ - - - - -	2 0
1st Worcestershire Regiment	839	1,568	21	25	61·87	1868·9	25·03	29·83	73·74	26·91	14·40	Nasirabad. 12 „ - - - - -	4 0
1st Seaforth Highlanders -	255	236	4	—	11·71	925·5	15·69	—	45·92	16·76	18·11	Aden, 5 „ - - - - -	11 0
1st York and Lanc. Regiment	267	343	5	2	9·65	1284·6	18·73	7·49	36·14	13·19	10·27	Aden, 4½ „ - - - - -	11 0

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength.				Sick to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions.	Deaths.	Invalids.	Average Daily Sick.	Average Time			
													yrs. mo.
1st Wiltshire Regiment -	96	35	2	2	1·27	364·6	20·83	20·83	13·23	4·82	13·23	Aden, 2 months - - - - -	13 0
2nd North Staffordshire Regiment.	835	2,035	4	9	52·68	2437·1	4·79	10·78	63·08	23·03	9·45	Karachi, 12 „ - - - - -	3 0
2nd Royal Irish Fusiliers -	749	706	5	7	34·32	942·6	6·67	9·33	45·82	16·72	17·74	Belgaum, 12 months - - - -	13 0
1st Batt., Rifle Brigade -	765	1,034	3	48	59·48	1351 6	3·92	62·74	77·75	28·38	21·00	Ahmednagar, 12 „ - - - - -	3 0
Colaba Depôt - - -	103	64	5	10	13·11	621·3	48·54	97·09	127·28	46·46	74·76	Bombay - - - - - - -	--
Deolalee Depôt - -	353	269	10	5	9·05	762·0	28·33	14·16	25·64	9·36	12·28	Deolalee - - - - - - -	—
Convalescent - - -	86	161	1	—	7·10	1872·1	11·63	—	82·56	30·13	16·09	Purandhar, 12 months - - - -	—
„ - - - - -	51	127	2	29	8·35	2490·2	39·61	568·63	163·72	59·74	24·00	Ghizree, 12 „ - - - - -	—
„ - - - - -	27	68	—	—	2·33	2518·5	—	—	86·30	31·48	12·50	Mt. Abu 12 „ - - - -	—
„ - - - - - -	5	11	—	—	·51	2200·0	—	—	102·00	37·20	16·91	Teethul, 2 „ - - - -	—
„ - - - - -	35	92	—	2	3·89	2628·7	—	57·14	111·14	40·54	15·42	Taragarh, 8 „ - - - -	—
Various Corps - - -	197	206	—	40	11·91	1045·7	—	203·04	60·46	22·06	21·10	Includes Corps whose strength is less than 50 -	—
On the march - - -	250	130	1	—	3·10	520·0	4·00	---	12·40	4·52	8·70	———	—
Military Prison - - -	38	8	—	—	·49	210·5	—	—	12·89	4·68	22·25	Poona, 5 months - - - - -	—
Grand Total -	10,197	14,338	106	358	626·90	1406·1	10·40	53·11	61·48	22·44	15·96		

ABSTRACT No. XL.—TABLE taken from the REPORT of the PRINCIPAL INVALIDING in the THREE GRADES of COMMISSIONED OFFICERS, NON- Ten previous Years:

Years.	Average Strength.			Number of Deaths.		
	Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.
1872 - - -	448	1,199	9,699	10	32	173
1873 - - -	397	1,150	9,523	7	16	109
1874 - - -	385	1,189	9,439	1	16	97
1875 - - -	363	1,163	9,170	7	33	181
1876 - - -	368	1,173	9,111	5	18	110
1877 - - -	375	1,160	8,989	4	13	108
1878 - - -	364	1,316	8,588	3	34	166
1879 - - -	373	1,282	8,502	3	21	136
1880 - - -	366	1,279	7,921	4	42	168
1881 - - -	314	1,213	8,773	5	19	108
Average for 10 years -	375	1,207	8,971	5	24	136
Total - -	306	1,186	9,011	6	17	89

MEDICAL OFFICER at BOMBAY, showing the COMPARATIVE MORTALITY and COMMISSIONED OFFICERS, and PRIVATES for the Year under Report, and for the

Invalided.			Ratio per 1,000.					
			Deaths.			Invalids.		
Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.	Commissioned Officers.	Non-commissioned Officers.	Privates.
34	30	282	22·55	26·69	17·84	76·75	25·02	29·03
38	47	379	17·63	13·91	11·44	95·72	40·87	39·80
27	65	376	12·59	14·05	10·28	70·13	51·07	39·83
33	55	573	11·02	28·37	19·74	90·91	47·29	62·49
43	49	433	13·59	13·59	15·27	116·85	41·56	47·52
35	63	427	10·67	10·67	11·21	93·33	54·31	47·50
44	86	492	8·24	25·84	19·33	120·88	65·35	57·29
20	75	521	8·04	16·38	15·99	53·62	58·50	61·28
21	51	427	10·92	32·83	21·20	57·37	39·87	53·90
22	75	449	15·92	15·66	12·30	70·06	61·83	51·18
32	60	486	13·33	19·88	15·16	85·33	49·71	48·60
15	48	310	19·61	14·33	9·88	49·02	40·47	34·40

ABSTRACT No. XLI.—Table showing the Average Strength, Admissions into Hospital, and Deaths and Invalids of the Troops stationed in Egypt during the Year 1882, with the Ratios

Orders.	Diseases.	Average Strength, 6,198. Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally discharged the Service.
	I.—*General Diseases.*						
	Febrile Group.						
	Eruptive Fevers { Small-pox	3	—	—	—	—	—
	Eruptive Fevers { Other	—	—	—	—	—	—
	Continued „ { Enteric	575	172	51	223	71	—
	Continued „ { Other	2,606	7	—	7	212	—
	Yellow Fever	—	—	—	—	—	—
	Paroxysmal Fevers	447	16	4	20	143	—
	Cholera	—	—	—	—	—	—
	Other diseases	10	1	2	3	3	—
	Total	3,641	196	57	253	429	—
	Constitutional Group.						
	Rheumatism	241	—	—	—	72	—
	Primary Syphilis	786	—	—	—	90	—
	Secondary „	65	—	—	—	18	1
	Tubercular Diseases	28	3	4	7	12	2
	Scurvy and Purpura	3	—	—	—	2	—
	Other diseases	4	—	—	—	2	—
	Total	1,127	3	4	7	196	3
	II.—*Local Diseases.*						
	Nervous System	219	4	5	9	75	3
	Eye	1,766	—	—	—	380	3
	Ear	27	—	—	—	4	—
	Nose	1	—	—	—	—	—
	Circulatory System	52	2	—	2	16	10
6	Absorbent	74	—	—	—	17	—
7	Ductless Glands	1	—	—	—	—	—
8	Respiratory System	230	9	1	10	28	—
9	Digestive „	4,590	75	55	130	1,087	1
10	Urinary System { Gonorrhœa	288	—	—	—	30	—
	Urinary System { Sequelæ of Gonorrhœa	41	—	—	—	11	—
	Urinary System { Other diseases	28	—	1	1	6	—
11	Generative System	60	—	—	—	15	—
12	Organs of Locomotion	34	—	—	—	9	—
13	Cellular Tissue	190	—	—	—	48	—
14	Cutaneous System	419	—	—	—	58	—
	III.—*Debility*	738	7	1	8	485	4
	IV.—*Poisons*	8	1	—	1	—	—
	V.—*Injuries.*						
1	General	1	7	2	9	—	—
2	Local	476	8	—	8	79	2
3	In action	378	93	20	113	256	23
	No appreciable disease	3	—	—	—	—	—
	Cause unknown (refers to death only)	—	—	—	—	—	—
	General total	14,392	405	146	551	3,229	49

* The average ratios for 10 years will be given in future years. The average ratios for the year 1882, will be

† The Principal Medical Officer in Egypt not having been able to

HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the TROOPS per 1,000 of the Strength and the average Ratios for 10 Years.*

Average Number constantly Sick.†	Ratio per 1,000.					Average Ratio per 1,000 from 1882 to 18 .		
	Admissions.	Deaths.	Invalids Sent Home.	Invalids finally discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids Sent Home.
—	·5	—	—	—				
—	—	—	—	—				
—	92·8	35·98	11·46	—				
—	420·4	1·13	34·20	—				
—	—	—	—	—				
—	72·1	3·23	23·07	—				
—	—	—	—	—				
—	1·6	·48	·48	—				
—	587·4	40·82	69·21	—				
—	38·9	—	11·62	—				
—	126·8	—	14·52	—				
—	10·5	—	2·90	·16				
—	4·5	1·13	1·94	·32				
—	·5	—	·32	—				
—	·6	-	·32	—				
—	181·8	1·13	31·62	·48				
—	35·3	1·45	12·10	·48				
—	284·9	—	61·31	·48				
—	4·3	—	·65	—				
—	·2	—	—	—				
—	8·4	·32	2·58	1·61				
—	11·9	—	2·74	—				
—	·2	—	-	—				
—	37·1	1·61	4·51	—				
—	740·6	20·98	175·38	·16				
—	46·5	—	4·84	—				
—	6·6	—	1·78	—				
—	4·5	·16	·97	—				
—	9·7	—	2·42	—				
—	5·5	—	1·45	—				
—	30·6	—	7·75	—				
—	67·6	—	9·36	—				
—	119·1	1·29	78·25	·65				
—	1·3	·16	—	—				
—	·2	1·45	—	—				
—	76·8	1·29	12·75	·32				
—	61·0	18·23	41·30	3·71				
—	·5	—	—	—				
—	—	—	—	—				
—	2322·0	88·90	520·97	7·90				

given in the Report for 1883; those for the two years 1882 to 1883 in that for 1884, &c. &c. furnish the necessary statistics this information cannot be given

ABSTRACT No. XLII.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS and returning from FOREIGN SERVICE, and proceeding from one Colony

Orders.	Strength of N.C.O. and Men:	Passage Out.		Passage Home.		Intercolonial.	
	Embarked	33,008		23,085		17,510	
	Average Annual Strength	1,638		1,386		563	
	Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
	I.—*General Diseases.*						
	Febrile Group.						
	Eruptive Fevers — Small Pox	1	—	—	—	—	—
	Eruptive Fevers — Other	11	—	—	—	1	—
	Continued „ — Enteric	1	—	43	1	7	—
	Continued „ — Other	36	—	88	—	31	—
	Yellow Fever	—	—	—	—	—	—
	Paroxysmal Fevers	8	—	60	—	15	1
	Cholera	—	—	—	—	—	—
	Other diseases	10	—	1	—	2	—
	Total	67	—	192	1	56	1
	Constitutional Group.						
	Rheumatism	38	—	25	—	6	—
	Primary Syphilis	287	—	127	—	39	—
	Secondary „	34	—	19	—	2	—
	Tubercular diseases	6	—	6	1	2	—
	Scurvy and Purpura	2	—	—	—	—	—
	Other Diseases	—	—	1	—	—	—
	Total	367	—	178	1	49	—
	II.—*Local Diseases.*						
	Diseases of the—						
1	Nervous System	6	—	5	2	4	—
2	Eye	21	—	64	—	5	—
3	Ear	6	—	4	—	—	—
4	Nose	—	—	1	—	—	—
5	Circulatory System	6	—	3	1	—	—
6	Absorbent „	7	—	18	—	5	—
7	Ductless Glands	1	—	—	—	—	—
8	Respiratory System	70	3	90	—	5	—
9	Digestive „	142	—	211	1	32	—
10	Urinary System — Gonorrhœa	327	—	69	—	43	—
10	Urinary System — Sequelæ of Gonorrhœa	13	—	15	—	5	—
10	Urinary System — Other diseases	10	—	3	—	6	—
11	Generative System	11	—	15	—	2	—
12	Organs of Locomotion	8	—	3	—	—	—
13	Cellular Tissue	29	—	32	—	11	—
14	Cutaneous System	227	—	61	—	17	—
	III.—*Debility*	29	—	76	—	10	—
	IV.—*Poisons*	2	—	4	1	1	—
	V.—*Injuries.*						
1	General	4	1	—	2	1	—
2	Local	135	—	49	—	32	—
3	In action	—	—	—	—	—	—
	Not yet diagnosed	1	—	4	—	—	—
	No appreciable disease	—	—	2	—	—	—
	Cause unknown (refers to deaths only).	—	—	—	—	—	—
	General Total	1,489	4	1,099	9	284	1
	Average of 10 years 1872–81	—	—	—	—	—	—

into HOSPITAL, and DEATHS among the TROOPS on BOARD SHIP, proceeding on or Station abroad to another, with the ratio per 1,000 of the Strength.

Ratio per 1,000 of the Strength.					
Passage out.		Passage Home.		Intercolonial.	
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
·6	—	—	—	—	—
6·7	—	—	—	1·8	—
·6	—	31·0	·72	12·4	—
22·0	—	63·5	—	55·1	—
—	—	—	—	—	—
4·9	—	43·3	—	26·6	1·78
—	—	—	—	—	—
6·1	—	·7	—	3·6	—
40·9	—	138·5	·72	99·5	1·78
23·2	—	18·0	—	10·6	—
175·2	—	91·7	—	69·2	—
20·8	—	13·7	—	3·6	—
3·7	—	4·3	·72	3·6	—
1·2	—	—	—	—	—
—	—	·7	—	—	—
224·1	—	128·4	·72	87·0	—
3·7	—	3·6	1·44	7·1	—
12·8	—	46·2	—	8·9	—
3·7	—	2·9	—	—	—
—	—	·7	—	—	—
3·7	—	2·2	·72	—	—
4·3	—	13·0	—	8·9	—
·6	—	—		—	—
42·7	1·83	64·9	—	8·9	—
86·7	—	152·2	·72	56·8	—
199·6	—	49·8	—	76·4	—
7·9	—	10·8	—	8·9	—
6 1	—	2·2	—	10·6	—
6·7	—	10·8	—	3·6	—
4·9	—	2·2	—	—	—
17·7	—	23·1	—	19·5	—
138·6	—	44·0	—	30·2	—
17·7	—	54·8	—	17·7	—
1·2	—	2·9	·72	1·8	—
2·4	·61	—	1·44	1·8	—
82·4	—	35·4	—	56·8	—
—	—	—	—	—	—
·6	—	2·9	—	—	—
—	—	1·4	—	—	—
—	—	—	—	—	—
909·0	2·44	792·9	6·49	504·4	1·78
583·3	4·67	572·8	18·19	820·6	6·65

ABSTRACT No. XLIII.—On the Influence of Age on the Mortality.—Table showing the Death Rates of the Non-commissioned Officers and Men at the several Ages, arranged by quinquennial Periods, in the several Foreign Commands.

Commands.	Under 20 Years.				20 and under 25.				25 and under 30.				30 and under 35.				35 and under 40.				40 and upwards.			
	Strength.	Died.	Ratio per 1,000.		Strength.	Died.	Ratio per 1,000.		Strength.	Died.	Ratio per 1,000.		Strength.	Died.	Ratio per 1,000.		Strength.	Died.	Ratio per 1,000.		Strength.	Died.	Ratio per 1,000.	
			1882.	1872-81.			1882.	1872-81.			1882.	1872-81.			1882.	1872-81.			1882.	1872-81.			1882.	1872-81.
Gibraltar	416	6	14·42	1·64	2,134	17	7·97	4·09	1,159	10	8·63	4·96	519	7	13·49	6·06	227	3	13·22	7·72	50	3	60·00	18·28
Malta	443	8	18·06	5·82	1,857	15	8·08	8·72	1,115	7	6·28	7·60	410	3	7·32	8·69	173	4	23·12	10·98	62	1	16·13	13·57
Cyprus	50	1	20·00	—	217	2	9·22	7·60†	117	3	25·64	11·61†	51	—	—	9·30†	30	1	33·33	—	12	—	—	—
Egypt	*	*	*	—	*	*	*	—	*	*	*	—	*	*	*	—	*	*	*	—	*	*	*	—
Canada	147	1	6·80	—	695	—	—	4·41	817	3	3·67	4·94	254	1	3·94	9·88	80	1	12·50	11·02	36	—	—	19·82
Bermuda	149	—	—	2·38	702	3	4·27	4·68	295	4	13·56	7·49	176	3	17·04	10·65	72	—	—	9·94	25	1	40·00	26·72
West Indies	52	—	—	13·42	208	3	14·42	22·31	207	1	4·83	15·24	77	1	12·99	21·67	25	—	—	6·74	13	—	—	37·04
Cape of Good Hope and St. Helena	334	4	11·98	3·10‡	2,346	35	14·92	3·81‡	1,587	23	14·49	7·18‡	486	9	18·52	11·45‡	243	3	12·35	24·37‡	68	—	—	9·74‡
Mauritius	13	—	—	9·80	157	1	6·37	15·82	189	3	15·87	24·77	32	1	31·25	16·22	20	—	—	21·58	3	—	—	56·34
Ceylon	25	—	—	2·82	414	3	7·25	11·46	374	3	8·02	13·54	91	1	10·99	14·20	42	1	23·81	23·66	13	—	—	72·29
China and Straits Settlements.	23	1	43·48	3·62	835	4	4·79	5·90	541	2	3·70	10·60	173	2	11·56	11·68	72	1	13·89	20·66	17	—	—	32·15
India	1,575	16	10·16	6·59	19,895	241	12·11	15·68	20,476	238	11·62	17·05	9,348	127	13·58	22·00	3,695	57	15·43	25·58	857	12	14·00	49·29

* The Principal Medical Officer in Egypt not having been able to furnish the necessary statistics, this information cannot be given.
† For three years only. ‡ For five years only.

ABSTRACT No. XLIV.—The various CORPS which served in the different HOME DISTRICTS during the year 1882, and some of the most important of their HEALTH STATISTICS, are shown in the following Table.

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	NORTHERN.											days.	days.
	2nd Dragoon Guards - - -	12	450	392	5	14	22·55	871·1	11·11	31·11	50·11	18·29	20·99
	5th Dragoon Guards - - - -	26	604	577	6	15	33·77	955·3	9·93	24·38	55·91	20·40	21·36
	7th Dragoon Guards - - - -	14 6/12	53	112	1	1	5·98	2113·2	18·86	18·86	112·83	41·18	19·48
	8th Hussars - - - - -	—	—	—	1	—	—	—	—	—	—	—	—
	11th Hussars - - - - -	5	196	189	1	—	8·66	979·7	5·10	—	44·13	16·12	16·72
	16th Lancers - - - - -	6	228	178	—	27	16·42	787·7	—	118·42	72·01	26·28	33·67
N/A	Royal Horse Artillery - - -	3/12	26	36	—	—	1·21	1384·6	—	—	46·53	16·98	12·26
J/1	Royal Artillery - - - -	3	201	206	1	4	12·10	1024·9	4·97	19·90	60·19	21·97	21·43
T/1	Royal Artillery - - - -	5 1/12	69	55	—	1	2·69	797·1	—	14·49	38·98	14·22	17·87
Dpt/1	Royal Artillery - - - -	1	146	103	1	—	4·00	705·4	6·84	—	27·39	10·00	14·17
G/2	Royal Artillery - - - -	2 10/12	106	127	1	—	7·37	1198·1	9·43	—	69·52	25·37	21·17
K/2	Royal Artillery - - - -	7 3/12	88	77	—	4	4·50	875·0	—	45·45	51·13	16·39	21·33
N/2	Royal Artillery - - - -	8	45	25	—	1	·91	555·5	—	22·22	20·22	7·38	14·08
Q/2	Royal Artillery - - - -	3	·36	2	—	—	·12	55·5	—	—	3·23	1·21	21·00
Dpt/2	Royal Artillery - - - -	6	47	29	3	2	1·79	617·0	63·82	42·55	38·08	13·90	22·52

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	NORTHERN—*cont.*											days.	days.
A/3	Royal Artillery	2	101	89	4	—	4·72	881·2	39·60	—	46·73	17·05	19·35
B/3	Royal Artillery	2	98	74	1	—	3·27	755·1	10·20	—	33·36	12·17	16·12
B/5	Royal Artillery	6	49	40	—	1	3·12	816·3	—	20·40	63·67	23·24	28·45
D/6	Royal Artillery	3	26	29	—	—	1·20	1115·4	—	—	46·15	16·84	15·10
	Royal Engineers	—	20	6	2	—	·19	300·0	100·00	—	9·50	3·46	11·55
1st	Royal Lancaster Regiment	1 1/11	196	183	2	2	7·22	933·7	10·20	10·20	36·83	13·44	14·40
1st	Liverpool Regiment	4	292	322	5	9	16·57	1102·7	17·12	30·82	56·74	20·71	18·78
1st	West Yorkshire Regiment	3	163	122	1	4	9·83	748·5	6·13	24·53	60·30	22·01	29·40
1st	South Wales Borderers	3 4/11	320	321	1	11	21·62	1003·1	31·25	34·37	67·56	24·66	24·58
2nd	Welsh Regiment	4	459	461	4	13	28·41	1004·3	8·71	28·32	61·89	22·59	22·49
1st	Highland Light Infantry	—	—	—	1	—	—	—	—	—	—	—	—
2nd	Leinster Regiment	5 4/11	318	296	1	6	19·56	930·8	31·44	18·86	61·50	19·30	24·11
2nd	Royal Dublin Fusiliers	11 11/12	509	591	2	10	33·65	1161·1	3·92	19·64	66·10	24·13	19·25
	Depôt, Royal Lancaster Regiment	Since formation.	80	45	—	10	3·79	562·5	—	125·00	47·37	17·29	30·74
	„ Northumberland Fusiliers	„	94	98	3	3	5·06	1042·5	31·91	31·91	53·82	19·64	18·84
	„ Royal Warwickshire Regiment	„	83	60	—	—	4·08	722·9	—	—	49·15	17·94	24·81
	„ Liverpool Regiment	„	86	75	1	—	3·14	872·1	11·62	—	36·51	13·32	15·28

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	NORTHERN—*cont.*											days.	days.
	Depôt, West Yorkshire Regiment	Since formation.	129	288	3	11	13·00	2232·5	23·25	85·27	100·77	36·77	16·48
	„ East Yorkshire Regiment	„	107	93	—	9	4·11	869·1	—	84·11	38·41	14·02	16·13
	„ Leicestershire Regiment	„	139	198	—	4	11·21	1424·5	—	28·77	80·64	29·43	20·66
	„ Yorkshire Regiment	„	102	63	1	—	2·16	607·8	9·80	—	21·17	7·72	12·71
	„ Lancashire Fusiliers	„	122	147	—	6	5·70	1204·9	—	49·18	46·72	17·05	14·15
	„ Cheshire Regiment	„	99	111	—	6	6·00	1121·2	—	60·60	60·60	22·12	19·72
	„ Royal Welsh Fusiliers	„	125	68	1	2	4·37	544·0	8·00	16·00	34·96	12·76	23·45
	„ King's Own Borderers	„	94	49	4	9	4·26	521·3	42·55	95·74	45·31	16·54	31·73
	„ East Lancashire Regiment	„	104	40	1	—	3·19	384·6	9·61	—	30·67	11·09	29·10
	„ West Riding Regiment	„	127	165	—	4	8·21	1299·2	—	31·49	64·64	23·59	18·16
	„ Border Regiment	„	82	82	—	5	4·29	1000·0	—	60·97	52·31	18·97	18·97
	„ South Staffordshire Regiment	„	114	84	—	2	4·00	736·0	—	17·00	35·00	12·00	16·00
	„ South Lancashire Regiment	„	118	63	—	—	2·33	533·9	—	—	19·74	7·20	13·49
	„ Derbyshire Regiment	„	113	110	—	2	3·93	973·4	—	17·69	34·77	12·69	13·04
	„ Loyal North Lancashire Regiment	„	247	177	—	3	6·95	716·6	—	12·14	28·29	10·27	14·33
	„ Northamptonshire Regiment	„	92	128	—	20	4·42	1391·3	—	217·39	48·04	17·64	12·60
	„ South Yorkshire Regiment	„	93	63	2	—	2·32	666·6	10·75	—	24·94	9·15	13·65

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	NORTHERN—*cont.*												
												days.	days.
	Depôt, Shropshire Light Infantry	Since formation.	130	128	2	6	5·68	969·2	15·38	46·15	43·69	15·94	16·45
	„ Manchester Regiment	„	244	290	3	21	13·03	1229·5	12·29	86·06	53·40	19·49	16·39
	„ North Staffordshire Regiment	„	110	79	1	1	5·00	720·0	9·00	9·00	45·00	17·00	23·00
	„ York and Lancaster Regiment	„	126	93	—	3	5·07	738·1	—	23·80	40·23	14·68	19·88
	„ Durham Light Infantry	„	156	180	2	9	8·00	1153·8	12·82	57·69	51·28	18·71	16·22
	Garrison Staff and Departments	„	201	28	1	1	3·27	139·3	4·97	4·97	16·27	5·93	42·62
	EASTERN.												
	7th Dragoon Guards	15	340	485	3	6	19·47	1426·5	8·82	17·65	57·26	20·91	14·65
	7th Hussars	2	317	206	1	5	9·79	649·8	3·15	15·77	30·88	11·31	17·30
	Royal Artillery	Various	1,124	731	7	25	33·76	650·4	6·23	22·24	30·04	10·96	16·86
1st	Royal Warwickshire Regiment	3	237	296	1	12	12·39	1257·4	4·22	50·63	52·27	19·08	15·17
1st	Royal Fusiliers	12	185	157	—	1	5·86	848·6	—	5·41	31·67	11·53	13·57
1st	Norfolk Regiment	12	400	276	3	3	14·77	690·0	7·50	7·50	36·93	13·47	19·53
1st	Devonshire Regiment	5	281	161	3	14	10·98	572·9	10·67	49·83	39·07	14·26	24·89
1st	South Wales Borderers	3	316	248	3	10	17·28	784·8	9·49	31·65	54·68	19·96	25·43
1st	Manchester Regiment	—	85	180	2	—	5·03	2117·6	23·53	—	59·17	21·59	10·20

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	EASTERN—*cont.*											days.	days.
	Depôt, Norfolk Regiment	Since formation.	107	139	—	15	4·77	1299·1	—	140·18	44·58	16·27	12 53
	„ Lincolnshire Regiment	„	86	73	—	2	3·72	848·8	—	23·25	43·25	15·78	18·60
	„ Suffolk Regiment	„	105	196	—	18	7·84	1886·7	—	171·43	74·67	27·25	14·60
	„ Bedfordshire Regiment	„	120	142	—	3	4·32	1183·3	—	25·00	36·00	13·14	11·11
	„ Essex Regiment	„	215	210	2	10	11·09	977·4	9·30	46·51	51·58	18·83	19·27
	Provisional Battalion	—	223	253	1	—	13·19	863·5	3·42	—	45·02	16·43	19·03
	Other Corps	Various	49	39	—	10	6·73	795·9	—	204·08	137·35	50·13	62·97
	Garrison Staff and Departments	—	58	12	—	1	·74	206·9	—	17·24	12·76	4·66	22·51
	WESTERN.												
A.	Royal Horse Artillery	—	288	222	—	3	16·60	770·8	—	10·41	57·64	21·04	27·29
B.	Royal Horse Artillery												
1st	Royal Artillery	5	52	59	2	2	4·37	1134·6	38·46	38·46	84·04	30·67	27·03
2nd	Royal Artillery	8	171	177	—	6	12·24	1035·1	—	35·09	71·58	26·13	25·24
3rd	Royal Artillery	—	25	30	1	—	·80	1200·0	40·00	—	32·00	11·68	9·73
4th	Royal Artillery	—	89	77	—	2	3·12	865·2	—	22·47	25·06	12·80	14·70
1st	Royal Artillery, Western Division	—	585	430	1	20	33·16	735·0	1·71	34·19	56·68	20·69	28·15

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	WESTERN—*cont.*											days.	days.
1st	Royal Artillery, Welsh Division	2	382	183	1	16	12·07	479·0	2·61	41·88	31·60	11·53	24·07
Coast Brig.	Royal Artillery	—	171	23	3	3	1·22	134·5	17·54	17·54	7·13	2·60	19·36
	Royal Engineers	—	148	31	4	3	1·77	209·4	27·03	20·27	11·96	4·37	20·84
1st	Royal Lancaster Regiment	1	266	193	—	9	13·55	725·6	—	33·92	50·94	18·59	25·63
2nd	Royal Welsh Fusiliers	—	566	387	4	9	23·06	683·7	7·07	15·90	40·74	14·87	21·75
1st	Duke of Cornwall's Light Infantry	5	266	290	1	6	15·48	1090·2	3·77	22·56	58·19	21·24	19·48
2nd	South Lancashire Regiment	12	906	841	1	17	47·40	928·2	1·10	18·76	52·32	19·10	20·57
	Depôt, Devonshire Regiment	Since formation.	107	97	—	5	5·57	906·5	—	46·73	52·06	19·00	20·96
	„ Somersetshire Light Infantry	„	92	76	1	7	4·84	826·1	10·87	76·09	47·17	17·22	20·84
	„ South Wales Borderers	„	100	116	1	2	5·00	1160·0	10·00	20·00	50·00	18·25	15·73
	„ Gloucestershire Regiment	„	133	113	—	3	7·06	849 6	—	22·56	53·06	19·38	22·80
	„ Worcestershire Regiment	„	68	53	2	2	2·92	779·4	29·44	29·41	42·94	15·67	20·11
	„ Duke of Cornwall's Light Infantry	„	106	110	1	2	5·29	1037·7	9·43	18·87	49·91	18·23	17·55
	„ Welsh Regiment	„	105	62	2	—	3·19	950·5	19·05	—	30·38	11·09	18·78
	Other Corps	—	112	42	3	9	14·52	375·0	26·79	80·36	129·64	47·32	126·19
	Garrison Staff and Departments	—	133	25	3	1	1·92	187·9	22·56	7·52	14·44	5·27	28·03

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	SOUTHERN.											days.	days.
	Royal Artillery	Various	1,841	1,391	16	41	98·20	755·6	8·69	22·27	53·34	19·47	25·77
	Royal Engineers	„	194	115	1	—	5·48	502·8	5·15	—	28·25	10·31	17·39
1st	Royal West Surrey Regiment	4	163	104	—	2	5·23	678·0	—	12·27	32·00	11·71	18·36
1st	Northumberland Fusiliers	2	32	34	1	7	5·08	106·3	31·25	218·75	157·19	57·37	54·00
1st	Lincolnshire Regiment	3	11	13	3	5	3·74	1181·8	272·73	454·55	340·00	124·10	105·01
1st	West Yorkshire Regiment	3	57	53	—	2	2·34	929·8	—	35·09	41·05	14·98	16·12
1st	Leicestershire Regiment	1	500	491	5	10	28·72	982·0	10·00	20·00	57·44	20·97	21·35
1st	Gloucestershire Regiment	3	123	131	—	—	6·30	1065·0	—	—	51·22	18·70	17·55
1st	Dorsetshire Regiment	1	330	402	2	6	17·90	1218·2	6·06	18·18	54·24	19·80	16·25
2nd	Royal Highlanders	2	538	545	6	21	30·66	1013·0	11·15	39·03	56·99	20·80	20·53
2nd	Berkshire Regiment	2	546	735	3	13	46·17	1346·2	5·49	23·81	84·54	30·86	22·93
2nd	Shropshire Light Infantry	1⅛	325	386	1	13	22·95	1187·7	3·08	40·00	70·62	25·77	21·70
2nd	King's Royal Rifle Corps	2	370	332	3	4	13·38	897·3	8·10	10·81	36·16	13·20	14·71
1st	Seaforth Highlanders	¾	81	134	2	—	6·40	1654·3	24·69	—	79·01	28·84	17·43
2nd	Gordon Highlanders	1	345	359	3	6	21·67	1040·6	8·70	17·39	62·81	22·93	22·03
	Other Corps	Various	231	258	13	68	34·19	1102·6	56·28	294·37	148·01	54·02	48·37

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	SOUTHERN—*cont.*											days.	days.
	Depôt, Hampshire Regiment	Since formation.	146	166	1	9	8·42	1137·0	6·85	61·64	57·67	21·05	18·51
	„ Dorsetshire Regiment	„	144	198	1	—	10·16	1375·0	6·94	—	70·56	25·75	18·72
	„ Wiltshire Regiment	„	128	122	—	—	5·43	951·3	—	—	41·45	15·13	16·25
	Rifle Depôts	„	297	268	3	17	13·40	902·4	10·10	57·24	45·13	16·47	18·25
	Other Depôts	„	3	—	—	—	3·40	—	—	—	1133·33	413·67	—
	Garrison Staff and Departments	—	355	196	3	13	14·16	549·3	8·45	36·83	39·89	14·56	26·50
	CHATHAM.												
V/1	Royal Artillery	4	169	185	1	24	9·90	1094·7	5·91	38·46	58·57	21·38	19·53
	Royal Artillery	Various	455	422	3		17·57	927·5	6·59		38·61	14·09	15·19
	Royal Engineers	„	1,313	858	7	25	44·20	653·5	5·22	19·04	33·66	12·28	18·80
2nd	Royal Irish Regiment	11	584	907	5	56	44·90	1553·1	8·56	95·89	76·88	28·06	18·06
1st	Derbyshire Regiment	4	331	329	2	33	19·00	993·9	6·04	99·69	57·40	20·95	21·07
2nd	East Lancashire Regiment	2	447	509	2	36	28·00	1138·7	4·47	80·53	62·63	22·86	20·07
1st	Royal Warwickshire Regiment	2	253	312	—	9	20·60	1186·3	—	34·21	78·32	28·58	24·09
	Other Corps	Various	356	153	2	—	6·79	429·8	5·61	—	19·07	6·96	16·19
	Garrison Staff and Departments	„	185	75	5	16	7·80	405·4	27·02	86·48	42·16	15·38	37·96

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	SOUTH-EASTERN.												
	4th Dragoon Guards	Under one year.	147	142	5	—	7·99	966·0	34·01	—	54·35	days. 19·83	days. 20·53
	15th Hussars	"	240	320	2	10	12·44	1333·3	8·33	41·66	51·83	18·91	14·18
	Cavalry Depôt	11	1,052	1,047	2	20	62·28	995·2	1·90	19·01	59·20	21·60	21·71
A/1	Royal Horse Artillery	—	201	179	1	5	12·41	890·5	4·97	24·87	61·74	22·53	25·30
A/K	Royal Horse Artillery	4											
A/N	Royal Horse Artillery	11											
1st	Eastern Division Royal Artillery	2	85	94	—	6	6·33	1105·9	—	70·58	74·47	27·18	24·57
1st	Cinque Ports Royal Artillery	Various	677	494	2	8	19·55	729·7	2·95	11·81	28·87	10·54	14·44
1st and 3rd Coast Brig.	Royal Artillery	Under one year.	190	263	2	8	14·18	1384·2	10·52	42·10	74·63	27·24	19·67
	Royal Artillery	—	44	10	1	—	1·45	227·3	22·72	—	32·95	12·02	52·92
	Royal Engineers	—	95	59	1	1	2·54	621·0	10·52	10·52	26·73	9·75	15·71
1st	East Kent Regiment	9	464	414	1	8	19·07	892·2	2·15	17·24	41·09	15·00	16·81
1st	Bedfordshire Regiment	12	498	472	2	12	22·80	947·8	4·01	24·09	45·78	16·71	17·63
2nd	Royal Irish Regiment	Under one year.	93	65	1	—	4·21	698·9	10·75	—	45·26	16·53	23·65
1st	Royal Scots Fusiliers	1	391	290	2	14	19·35	741·7	5·11	35·80	49·48	18·06	24·35
1st	Scottish Rifles	2	332	224	—	8	13·06	674·7	—	24·09	39·33	14·35	21·28

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	SOUTH-EASTERN—*cont.*											days.	days.
1st	East Surrey Regiment	1	73	103	—	—	2·86	1410·9	—	—	39·17	14·30	10·13
1st	Royal Irish Rifles	1	502	488	6	16	27·85	972·1	11·95	31·87	55·47	20·24	20·83
	Depôt, East Kent Regiment	Since formation.	132	168	—	3	8·21	1272·7	—	22·72	62·19	22·70	17·83
	„ Royal Sussex Regiment	„	235	247	4	6	11·01	1051·1	17·02	25·53	46·85	17·10	16·27
	„ Queen's Own Royal West Kent Regiment.	„	202	138	2	9	7·66	683·2	9·90	44·55	37·92	13·84	10·26
	Other Corps	—	180	62	3	—	4·17	344·4	16·66	—	23·16	8·45	24·54
	Commissariat and Transport Corps	—	59	43	—	2	2·93	728·8	—	33·89	49·66	18·12	24·87
	Garrison Staff and Departments	—	103	25	1	1	2·83	242·7	9·70	9·70	27·47	10·02	41·31
	HOME.												
	1st Life Guards	—	359	325	4	10	20·59	905·3	11·14	27·85	57·35	20·92	23·12
	2nd Life Guards	—	363	238	2	11	12·05	655·6	5·50	30·30	33·80	12·11	18·46
	Royal Horse Guards	—	381	242	1	10	16·16	635·2	2·62	26·24	42·41	15·48	24·37
	4th Hussars	3	146	129	2	2	6·56	883·6	13·69	13·69	44·98	16·40	18·56
	11th Hussars	—	285	257	—	13	14·50	901·7	—	45·61	50·87	18·57	20·59
	Royal Horse Artillery	4	110	82	—	3	4·83	745·4	—	27·27	43·90	16·02	21·49
	Royal Artillery (Field)	—	—	2	—	—	·09	—	—	—	—	—	16·42

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	HOME—*cont.*											days.	days.
	Royal Artillery (Garrison)	Various	37	18	1	—	·35	486·5	27·02	—	9·45	3·45	7·09
	Royal Engineers	„	50	17	1	—	·62	340·0	20·00	—	12·40	4·52	13·31
1st	Grenadier Guards	27	471	451	2	13	27·58	957·5	4·24	27·60	58·55	21·37	22·32
2nd	Grenadier Guards	2	436	380	1	1	16·64	871·5	2·29	2·29	38·16	13·70	15·50
3rd	Grenadier Guards	27	461	457	6	12	27·40	991·3	13·01	26·03	59·43	21·69	21·88
1st	Coldstream Guards	27	537	550	3	—	29·74	1024·2	5·58	—	55·40	20·21	19·54
2nd	Coldstream Guards	2	403	401	8	7	23·93	995·0	19·85	17·36	59·17	21·67	21·78
1st	Scots Guards	2	378	328	3	11	23·43	867·7	7·93	29·10	61·98	22·62	26·07
2nd	Scots Guards	27	636	586	5	15	27·38	854·4	7·28	21·86	39·91	14·56	17·05
1st	Royal Fusiliers	—	372	199	1	10	6·70	534·9	2·68	26·88	17·84	6·57	12·26
1st	Scottish Rifles	—	177	62	—	—	1·42	350·3	—	—	6·92	2·92	8·35
2nd	Royal Lancaster Regiment	—	50	6	—	—	2·78	120·0	—	—	55·60	20·29	159·10
1st	Royal Warwickshire Regiment	—	10	10	—	—	2·00	1000·0	—	—	200·00	73·00	73·00
2nd	King's Royal Rifle Corps	3	89	52	—	—	3·40	584·3	—	—	38·20	13·94	23·86
2nd	Royal Highlanders	—	12	13	—	—	·60	1083·8	—	—	50·00	18·25	16·84
	Argyll and Sutherland Highlanders	—	147	116	1	3	5·21	789·1	6·80	20·40	35·44	9·39	11·90
	Depôt, Royal West Surrey Regiment	Since formation.	117	54	—	3	2·77	461·5	—	25·64	23·67	8·63	18·70

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	HOME—*cont.*											days.	days.
	Depôt, East Surrey Regiment	Since formation.	105	111	—	4	4·09	1057·1	—	38·09	38·95	14·31	13·53
	„ Oxfordshire Light Infantry	„	96	107	—	8	4·28	1114·6	—	83·33	44·58	16·27	14·60
	„ Berkshire Regiment	„	94	129	—	4	4·10	1372·3	—	20·61	21·13	15·98	11·61
	„ Royal Fusiliers „ Middlesex Regiment	„	181	117	2	4	6·42	646·4	11·04	22·09	35·46	12·94	20·02
	Commissariat and Transport Corps	Various	81	60	—	—	3·35	740·7	—	—	41·35	15·21	20·54
	Garrison Staff and Departments	„	199	47	1	—	2·29	236·2	5·02	—	11·50	4·20	17·78
	Other Corps	„	83	110	5	5	10·98	1325·3	60·24	60·24	132·28	48·28	36·43
	WOOLWICH.												
	Royal Horse Artillery	Various	727	439	5	14	32·00	590·0	6·87	19·25	44·01	16·06	26·60
	Field Artillery	„	1,190	795	4	31	66·00	668·0	3·36	26·05	55·46	20·24	30·30
	Garrison Artillery	„	1,176	660	10	23	39·00	561·1	8·50	19·55	33·16	12·10	21·56
	Royal Warwickshire Regiment	2	42	26	—	—	1·48	619·0	—	—	35·23	17·57	20·77
	Wiltshire Regiment	$1\frac{6}{12}$	382	217	3	2	12·37	568·0	7·85	5·23	32·35	11·81	20·80
	Commissariat and Transport Corps	Various	292	234	1	1	13·00	801·3	3·42	3·42	44·52	16·25	20·27
	Ordnance Store Corps	„	195	95	—	2	6·00	487·1	—	10·25	30·76	11·23	23·05

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	WOOLWICH—*cont.*											days.	days.
	Army Hospital Corps - - -	Various	81	42	—	1	2·00	518·5	—	12·34	24·69	9·01	17·38
	Other Corps - - - - -	„	465	51	2	1	6·00	109·6	4·30	2·15	12·90	4·70	42·94
	ALDERSHOT.												
	4th Dragoon Guards - - -	25	350	167	2	7	14·41	477·1	5·71	20·00	41·17	15·08	31·49
	3rd Hussars - - - - -	11	425	291	3	9	29·10	684·7	7·06	21·18	68·47	24·99	36·29
	4th Hussars - - - - -	3	283	204	3	6	14·59	720·8	10·60	21·20	51·55	18·82	26·10
	15th Hussars - - - - -	1	200	120	1	6	6·33	600·0	5·00	30·00	31·65	11·55	19·25
	19th Hussars - - - - -	12	88	88	—	11	5·13	943·2	—	125·00	58·30	21·28	22·56
	Royal Horse Artillery - - -	—	484	309	3	10	21·04	638·4	6·20	20·66	43·47	15·87	24·85
	Royal Artillery - - - -	—	861	660	3	39	41·72	766·5	3·48	45·30	48·46	17·69	23·07
	Royal Engineers - - - -	—	606	415	—	11	20·68	684·8	—	18·15	34·12	12·46	18·19
1st	East Kent Regiment - - -	2	78	45	—	1	2·70	576·9	—	12·82	34·62	10·07	17·45
1st	Royal West Kent Regiment - -	—	651	574	1	4	50·21	881·7	1·53	6·14	77·13	29·69	31·93
1st	Royal West Surrey Regiment - -	—	380	277	3	11	21·98	728·9	7·89	28·95	57·84	21·11	28·96
1st	Lincolnshire Regiment - - -	—	142	277	2	2	14·93	1950·7	14·08	14·08	105·14	38·38	19·67
1st	West Yorkshire Regiment - - -	—	163	130	1	5	7·32	797·5	6·13	30·67	44·91	16·39	20·55

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	ALDERSHOT—*cont.*											days.	days.
1st	Duke of Cornwall's Light Infantry -	—	414	277	1	7	10·37	669·1	2·41	16·91	25·05	9·14	13·66
1st	Loyal North Lancashire Regiment -	12	432	374	3	10	8·09	865·7	6·94	23·15	18·72	6·84	7·90
2nd	Essex Regiment - - - -	—	418	581	2	9	24·10	1389·9	4·78	21·53	57·66	21·04	15·14
2nd	Highland Light Infantry - - -	4	584	348	1	14	27·46	595·9	1·71	23·97	47·05	17·17	28·82
2nd	Royal Munster Fusiliers - - -	—	378	661	1	7	44·26	1748·7	2·65	18·52	116·40	42·49	24·30
2nd	Shropshire Light Infantry - - -	—	241	232	3	6	12·30	962·6	12·45	24·90	51·04	18·63	19·35
2nd	Royal Dublin Fusiliers - - -	—	394	265	—	—	21·30	672·6	—	—	54·06	19·73	29·34
1st	Royal Irish Fusiliers - - -	9	803	474	5	20	37·51	590·3	6·23	24·91	46·46	16·96	28·71
2nd	York and Lancaster Regiment - -	$\frac{3}{12}$	120	168	1	—	4·20	1400·0	8·33	—	35·00	12·77	9·12
1st	Scottish Rifles - - - -	$2\frac{7}{12}$	136	81	1	—	3·70	595·6	7·35	—	27·21	9·93	16·67
1st	Dorsetshire Regiment - - -	$1\frac{1}{12}$	283	246	1	4	12·27	869·2	3·53	14·13	43·36	15·83	18·21
3rd	Rifle Brigade - - - - -	$11\frac{12}{12}$	97	40	—	—	3·21	412·4	—	—	33·09	12·08	29·29
2nd	Argyll and Sutherland Highlanders -	—	235	267	1	3	10·05	1136·1	4·25	12·77	43·76	15·61	13·74
	Commissariat and Transport Corps -	—	457	569	9	10	23·87	1245·1	19·69	21·88	63·17	23·06	18·53
	Army Hospital Corps - - -	—	462	470	4	11	23·30	975·1	8·30	23·83	48·34	17·64	18·02
	Divisional Staff and Mounted Police -	—	184	61	—	4	2·30	331·5	—	21·74	12·50	4·56	13·76
	Detachment Guards - - - -	—	160	13	1	—	3·40	81·3	6·25	—	21·25	7·76	95·46

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	ALDERSHOT—*cont.*											days.	days.
	Detachment Sandhurst - - -	—	113	—	—	—	—	—	—	—	—	—	—
	Other Corps - - - - -	—	—	463	8	25	68·28	—	—	—	—	—	—
	NORTH BRITISH.												
	3rd Dragoon Guards - - - -	13	395	452	1	6	20·93	1144·3	2·53	15·19	52·99	19·34	16·90
R/4	Royal Artillery - - - -	3	139	201	—	9	11·89	1446·0	—	64·75	85·54	31·23	21·59
	Depôt, Scottish Division Royal Artillery -	—	124	117	1	2	3·76	943·5	8·06	16·13	30·32	11·07	11·73
Coast Brigd.	Royal Artillery - - - -	2	40	12	2	—	·38	300·0	50·00	—	9·50	3·47	11·56
1st	Royal Highlanders - - - -	2	580	433	3	9	18·53	746·5	5·17	15·51	31·94	11·66	15·62
1st	Highland Light Infantry - - -	2	490	488	1	15	22·31	995·9	2·04	30·61	45·53	16·62	16·69
2nd	Gordon Highlanders - - - -	1	98	83	—	—	2·87	846·9	—	—	29·29	10·69	12·62
2nd	Argyll and Sutherland Highlanders -	2	58	52	—	—	1·92	896·5	—	—	33·10	12·08	13·48
	Depôt, Royal Scots - - - -	Since formation.	113	101	—	2	5·00	893·8	—	17·70	44·25	16·15	18·07
	„ Royal Scots Fusiliers - -	„	123	85	—	4	5·02	691·1	—	32·52	40·81	14·90	21·56
	„ Scottish Rifles - - -	„	93	62	—	2	3·37	666·7	—	21·50	36·24	13·22	19·84
	„ Royal Highlanders - - -	„	160	92	—	—	5·67	575·0	—	—	35·44	12·93	22·49
	„ Highland Light Infantry - -	„	142	91	4	2	3·71	640·8	28·16	14·08	26·13	9·54	14·88

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	NORTH BRITISH—*cont.*											days.	days.
	Depôt, Seaforth Highlanders	Since formation.	177	110	—	6	4·25	621·5	—	33·90	24·01	8·76	14·10
	„ Gordon Highlanders	„	120	85	2	6	5·28	708·3	16·66	50·00	44·00	16·06	22·67
	„ Cameron Highlanders	„	215	188	1	4	6·47	874·4	4·65	18·60	30·09	10·98	12·56
	„ Argyll and Sutherland Highlanders	„	97	64	—	6	4·61	659·8	—	61·85	47·52	17·35	26·29
	Other Corps	—	10	18	1	—	1·81	1800·0	100·00	—	181·00	66·06	36·70
	Garrison Staff and Departments	Various	64	8	—	1	·64	125·0	—	15·62	10·00	3·65	29·20
	CHANNEL ISLANDS.												
1/1	Northern Division Royal Artillery	7	96	74	—	—	3·88	770·8	—	—	40·41	14·75	19·14
1/2	Northern Division Royal Artillery	5	103	58	—	1	3·13	563·1	—	9·71	30·39	11·09	19·70
1/3	Northern Division Royal Artillery	9	107	59	1	—	4·20	551·4	9·34	—	39·25	14·33	25·98
Coast Brigd.	Royal Artillery	Various	39	4	—	1	·19	102·6	—	25·64	4·87	1·78	17·34
2nd	Suffolk Regiment	5	320	382	—	15	19·21	1193·7	—	46·87	60·03	21·91	18·33
1st	Cheshire Regiment	11	508	534	1	5	27·76	1051·2	1·96	9·84	54·64	19·94	18·97
1st	Middlesex Regiment	3	46	27	—	—	·77	586·9	—	—	16·74	6·11	10·41
	Garrison Staff and Departments	Various	13	—	—	—	—	—	—	—	—	—	—
	Other Corps	„	42	12	3	2	·68	285·7	71·43	47·62	16·19	5·91	20·68

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	BELFAST.											days.	days.
	16th Lancers	6	189	162	—	1	6·47	857·1	—	5·29	34·23	12·49	14·57
	19th Hussars	12	281	174	2	4	10·67	619·2	7·11	14·23	37·98	13·86	22·33
	North Irish Division Royal Artillery	1	29	19	—	2	·65	655·1	—	68·62	22·41	8·18	12·48
Coast Brigd.	Royal Artillery	Permanent	41	3	—	—	·10	73·1	—	—	2·44	·89	12·17
1st	East Yorkshire Regiment	12	467	465	—	6	23·04	995·7	—	10·71	49·33	18·01	18·08
1st	Bedfordshire Regiment	14	38	—	—	—	·36	—	—	—	9·47	3·46	—
2nd	Yorkshire Regiment	6	542	414	5	4	23·47	763·8	9·22	7·38	43·30	15·80	20·69
2nd	Oxfordshire Light Infantry	3	32	14	—	—	·25	437·5	—	—	7·81	2·85	6·51
2nd	Border Regiment	6	380	296	3	1	13·73	778·9	7·89	2·63	36·13	13·19	16·98
2nd	Durham Light Infantry	2	17	11	—	—	·50	647·0	—	—	29·41	10·73	16·59
2nd	Royal Inniskilling Fusiliers	6	602	325	6	12	17·80	539·8	9·96	19·93	29·57	10·79	20·00
	Depôt, East Yorkshire Regiment	—	15	7	—	—	·21	466·6	—	—	14·00	5·11	10·95
	„ Royal Inniskilling Fusiliers	—	76	87	1	6	2·88	1144·7	13·16	78·95	37·89	13·83	12·08
	„ Royal Irish Rifles	—	117	77	3	4	6·36	658·1	25·64	34·19	54·36	19·84	30·15
	„ Royal Irish Fusiliers	—	130	60	2	—	2·70	461·5	15·39	—	20·77	7·57	16·42
	Garrison Staff and Departments	Various	43	12	—	1	·52	279·0	—	23·25	12·09	4·41	15·82
	Other Corps	—	3	1	—	3	·04	333·3	—	1000·00	13·33	4·87	14·60

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	DUBLIN.											days.	days.
1st	Royal Dragoons	29	464	475	6	19	31·63	1023·71	12·93	40·95	68·17	24·88	24·30
5th	Royal Irish Lancers	8	433	192	2	—	8·02	443·42	4·62	—	18·52	6·76	15·25
16th	Lancers	5	14	24	—	1	1·30	1714·28	—	71·43	92·83	33·86	19·77
18th	Hussars	6	425	280	2	2	13·29	658·82	4·70	4·70	31·27	11·41	17·33
19th	Hussars	13	1	1	—	—	·17	1000·00	—	—	170·00	62·05	62·05
21st	Hussars	9	409	467	3	14	28·47	1141·81	7·33	34·23	69·60	25·41	22·25
A.	Royal Horse Artillery	From 3 to 10.	377	308	2	22	15·84	816·98	5·30	58·34	49·97	18·24	22·33
1st	Royal Artillery	»	723	720	5	25	37·28	997·23	6·92	36·01	51·63	18·85	18·90
	Royal Engineers	7	128	41	2	—	2·25	320·30	15·62	—	17·56	6·42	20·03
3rd	Grenadier Guards	29	257	452	—	14	23·17	1758·75	—	54·47	90·15	32·91	18·71
1st	Coldstream Guards	27	113	109	1	4	8·70	964·60	8·85	35·40	76·99	28·10	29·13
2nd	Coldstream Guards	29	223	350	1	10	15·64	1569·50	4·48	44·84	70·13	25·60	16·31
1st	Scots Guards	27	130	128	3	3	7·87	984·61	23·08	23·08	60·54	22·10	22·44
1st	East Kent Regiment	4	199	307	—	2	12·67	1542·71	—	10·05	63·67	23·24	15·06
1st	Northumberland Fusiliers	2	487	470	3	—	16·32	965·09	6·16	—	33·51	12·23	12·67
1st	Devon Regiment	5	142	219	2	9	9·67	1542·25	14·08	63·38	68·10	24·86	16·11

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	DUBLIN—*cont.*											days.	days.
2nd	Suffolk Regiment	9	218	170	1	—	7·66	779·82	4·59	—	35·14	12·82	16·45
1st	Somerset Light Infantry	1	531	444	2	14	25·51	836·16	3·77	26·36	48·04	17·53	20·97
1st	Gloucester Regiment	4	516	274	4	—	12·05	531·01	7·75	—	23·35	8·52	16·05
2nd	Royal Sussex Regiment	6	500	694	8	—	33·03	1388·00	16·00	—	66·06	24·11	17·37
2nd	Oxford Light Infantry	2	637	793	6	6	32·40	1244·90	9·42	9·42	50·86	18·56	14·91
1st	Derbyshire Regiment	4	183	194	1	—	7·27	1060·11	5·46	—	39·73	14·50	13·68
1st	Loyal North Lancashire Regiment	16	71	104	—	8	6·88	1464·79	—	112·68	89·86	32·80	22·39
1st	Northampton Regiment	1	134	56	2	—	1·32	417·91	14·92	—	9·85	3·59	8·60
2nd	Royal West Kent Regiment	1	453	758	2	2	44·13	1673·29	4·41	4·41	97·42	35·56	21·25
2nd	South York Regiment	8	624	523	1	—	17·80	838·11	1·60	—	28·52	10·41	12·42
1st	Shropshire Regiment	10	497	634	3	39	38·08	1301·85	6·16	80·08	79·43	28·99	22·27
1st	King's Royal Rifles	6	761	627	4	16	42·76	823·92	5·26	21·02	56·19	20·51	24·89
1st	North Stafford Regiment	10	568	336	4	—	12·07	591·55	7·04	—	21·25	7·76	13·11
2nd	York and Lancaster Regiment	12	670	526	7	—	27·04	785·07	10·45	—	40·36	14·73	18·76
2nd	Durham Light Infantry	9	469	623	6	10	30·19	1328·36	12·79	21·32	64·37	23·50	17·69
1st	Highland Light Infantry	2	71	89	1	—	3·08	1253·52	14·08	—	43·38	15·83	12·63
2nd	Connaught Rangers	1	454	411	7	—	23·34	905·29	15·42	—	51·41	18·76	20·73

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	DUBLIN—*cont.*											days.	days.
3rd	Rifle Brigade	10	455	658	—	13	41·22	1435·16	—	28·57	90·59	33·07	23·04
2nd	Leinster Regiment	11	220	190	2	—	7·37	863·64	9·09	—	33·50	12·23	14·16
	102nd Regimental District	9	111	114	1	—	2·70	1027·03	9·01	—	24·32	8·88	8·64
	Commissariat and Transport Corps	—	396	299	1	5	14·83	755·05	2·52	12·63	37·45	13·67	18·10
	Army Hospital Corps	—	74	45	—	3	2·76	608·11	—	40·54	37·30	15·61	22·39
	Men of other Corps	—	256	264	4	90	26·55	1031·29	15·62	351·56	103·71	37·85	36·71
	CORK.												
	2nd Dragoons	26	453	226	4	3	9·69	498·8	8·83	6·63	21·39	7·80	15·64
	20th Hussars	10	498	306	1	6	10·79	620·4	2·02	12·17	21·88	7·98	12·87
	Royal Artillery	7	1,047	600	5	17	29·46	573·0	4·77	16·23	28·13	10·27	17·92
	Royal Engineers	—	79	29	1	—	1·85	367·0	12·65	—	23·41	3·86	23·27
2nd	Grenadier Guards	26	364	187	1	2	7·77	513·7	2·74	5·49	21·34	7·79	15·17
2nd	Royal Scots	2	439	367	5	7	18·02	835·9	11·38	15·94	41·04	14·98	17·92
1st	Liverpool Regiment	4	245	357	1	15	18·50	1457·1	4·08	61·22	75·51	27·56	21·71
1st	Norfolk Regiment	8	155	164	1	2	6·63	1058·0	6·45	12·90	42·77	15·61	14·75
1st	Lincolnshire Regiment	5	205	282	2	2	6·20	1375·61	9·75	9·75	30·24	11·03	8·02

Brigade or Battalion.	Corps and Districts.	Completed Years of Service in United Kingdom since last return from Foreign Service.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
								Admitted.	Died.	Invalided.	Average Constantly Sick.		
	CORK—*cont.*											days.	days.
1st	Lancashire Fusiliers	2	535	458	1	13	16·48	856·0	1·86	24·22	30·80	11·24	13·13
2nd	King's Own Borderers	7	476	265	1	6	15·83	556·7	2·10	12·60	33·25	12·14	21·80
2nd	Worcestershire Regiment	7	518	328	3	8	14·25	633·2	5·79	15·44	27·50	10·04	15·86
2nd	West Riding Regiment	6	429	346	3	9	13·66	806·5	6·99	20·97	31·84	11·62	14·41
1st	Hampshire Regiment	2	694	389	4	6	16·96	560·1	5·76	8·64	24·43	8·92	15·64
2nd	South Staffordshire Regiment	2	491	250	1	7	12·25	509·1	2·03	14·25	24·95	9·11	17·80
2nd	Oxfordshire Light Infantry	8	187	128	—	1	4·86	684·4	—	5·34	25·98	9·48	13·86
1st	Northamptonshire Regiment	2	338	316	2	16	11·45	934·9	5·91	47·33	33·81	12·36	13·22
1st	Middlesex Regiment	3	430	420	2	11	17·83	976·7	4·65	25·58	41·46	15·13	15·49
2nd	Rifle Brigade	3	625	382	1	3	17·69	611·0	1·60	4·80	28·30	10·33	16·89
2nd	East Surrey Regiment	9	566	350	2	10	17·87	618·3	3·53	17·67	31·57	11·53	18·63
	Depôt, Royal Irish Regiment	—	329	262	—	6	9·58	796·3	—	18·23	29·11	10·63	13·35
	„ Royal Munster Fusiliers												
	Garrison Staff and Departments	—	537	202	9	12	10·96	376·1	16·77	22·34	20·40	7·45	19·80

ABSTRACT No. XLV.—The various Corps which served in the different Foreign Commands during the year 1882, and some of the most important of their Health Statistics, are shown in the following Table :—

Brigade or Battalion.	Corps and Commands.	Completed Years of Service in Foreign Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
					In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.		
	GIBRALTAR.													days.	days.
	Royal Artillery	2	986	544	10	—	10	14	38·96	551·7	10·14	14·20	39·51	14·42	26·14
	Royal Engineers	—	306	268	8	—	8	2	14·82	875·8	26·14	6·54	48·43	17·68	20·18
1st	East Surrey Regiment	—	347	439	2	—	2	2	20·81	1268·1	5·76	5·76	59·97	21·89	17·30
2nd	Duke of Cornwall's Light Infantry	2	418	294	4	—	4	6	22·45	703·3	9·57	14·35	53·71	19·60	27·87
1st	North Lancashire Regiment	—	426	399	—	—	—	2	24·73	936·6	—	4·69	58·05	21·19	22·62
1st	Berkshire Regiment	1	432	257	10	—	10	8	21·67	594·9	23·15	18·52	50·16	18·31	30·78
2nd	Essex Regiment	—	417	338	6	—	6	4	17·59	810·6	14·39	9·59	42·18	15·40	19·00
1st	Cameron Highlanders	3	410	279	2	—	2	6	15·96	680·5	4·88	14·63	38·96	14·21	20·88
2nd	Derbyshire Regiment	—	521	676	4	—	4	15	38·46	1297·5	7·68	28·79	73·82	26·94	20·77
2nd	Durham Light Infantry	—	174	166	—	—	—	4	9·84	954·0	—	22·99	56·55	20·64	21·64
	Other Infantry Regiments	—	6	2	—	1	1	2	1·48	333·3	16·66	33·33	246·66	90·03	270·10
	Garrison Staff and Departments	—	115	60	—	—	—	2	2·76	521·7	—	17·39	24·00	8·76	16·79
	MALTA														
	Royal Artillery	2 to 9	990	574	7	2	9	34	37·55	579·7	9·09	34·34	37·93	13·84	23·87

Brigade or Battalion.	Corps and Commands.	Completed Years of Service in Foreign Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness
					In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.		
	MALTA—*cont.*													days.	days.
	Royal Engineers	7	113	48	—	—	—	—	3·00	424·7	—	—	26·54	9·69	22·31
1st	Royal Scots	4	535	381	1	1	2	16	30·91	712·1	3·74	29·90	57·77	21·06	29·61
1st	Royal Sussex	3	212	103	2	—	2	8	6·96	485·8	9·43	37·73	32·68	11·98	24·55
2nd	Royal Sussex	—	388	530	4	—	4	6	25·67	1365·9	10·30	15·46	66·15	24·14	17·67
1st	South Staffordshire Regiment	1	445	367	3	—	3	19	23·15	824·7	6·74	42·69	63·25	23·06	27·99
3rd	King's Royal Rifles	—	217	151	2	—	2	4	11·71	695·8	9·21	18·43	53·96	19·69	28·30
2nd	Manchester Regiment	1	540	435	4	—	4	36	29·26	805·5	7·40	66·66	54·18	19·77	24·55
1st	Gordon Highlanders	1	484	245	2	—	2	26	18·16	506·1	4·13	53·71	37·53	13·69	27·05
2nd	Royal Munster Fusiliers	—	375	527	8	—	8	7	23·29	1412·8	21·44	18·76	63·43	23·79	16·13
2nd	Durham Light Infantry	—	133	160	—	—	—	—	4·94	1203·0	—	—	37·14	13·55	11·26
	Other Infantry Regiments	—	56	75	—	—	—	2	3·79	1339·3	—	35·71	67·68	24·70	18·44
	Garrison Staff and Departments	—	90	60	3	—	3	8	5·24	666·7	33·33	88·89	58·22	21·25	31·88
	EGYPT.	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	CYPRUS.														
	31st Company, Royal Engineers	4	25	51	1	—	1	—	1·62	2040·0	40·00	—	64·80	23·65	11·59
1st	Royal Sussex	3	328	223	2	—	2	9	10·21	679·9	6·09	27·46	31·13	11·36	16·71

Brigade or Battalion.	Corps and Commands.	Completed Years of Service in Foreign Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
					In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.		
														days.	days.
	CYPRUS—*cont.*														
1st	Royal West Kent - - -	—	80	105	2	—	2	—	7·55	1312·5	25·00	—	94·37	34·44	26·24
	Various detachments - -	—	106	168		—	1	4	6·47	1584·9	9·43	37·74	61·04	22·28	14·06
	Garrison Staff and Departments -	—	56	62	1	—	1	1	2·05	1107·1	17·86	17·86	36·61	13·36	12·07
	CANADA.														
	Royal Artillery - - -	2 to 6	294	185	2	—	2	4	7·90	628·1	6·80	13·60	26·86	9·76	15·51
	Royal Engineers - - -	4	140	77	1	—	1	1	3·63	550·0	7·14	7·14	25·98	9·48	17·12
1st	Yorkshire - - - -	2	747	543	2	—	2	10	25·32	734·9	2·67	13·37	33·89	12·38	16·96
1st	Royal Munster Fusiliers - -	4	678	528	—	1	1	4	24·56	778·7	1·47	5·90	36·23	13·21	16·96
	Garrison Staff and Departments -	—	33	11	1	—	1	2	·81	333·3	30·30	60·60	24·55	8·96	26·88
	BERMUDA.														
	Royal Artillery - - -	2	197	142	4	1	5	5	7·42	720·8	25·38	25·38	37·66	13·75	19·07
	Royal Engineers - - -	2	363	194	5	1	6	6	7·34	534·4	16·53	16·53	20·22	7·38	13·81
2nd	Royal Irish Rifles - -	2	807	596	2	—	2	11	33·16	734·8	2·47	13·63	39·86	14·54	19·79
	Garrison Staff and Departments -	2	79	27	—	—	—	1	·89	341·8	—	12·66	11·27	4·11	12·03

Brigade or Battalion.	Corps and Commands.	Completed Years of Service in Foreign Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
					In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.		
	West Indies.													days.	days.
	Royal Artillery - - -	2	96	50	1	—	1	2	1·98	520·8	10·42	20·83	20·62	7·53	14·45
	Royal Engineers - - -	—	11	9	—	—	—	1	·21	818·2	—	90·90	19·09	6·98	8·51
1st	Royal Scots - - - -	—	224	195	1	—	1	—	10·30	870·5	4·46	—	45·98	16·78	19·28
1st	Royal Lancaster - - -	2	112	60	1	—	1	1	5·25	535·7	8·93	8·93	46·87	17·11	31·93
	Detachment of Infantry - -	—	22	10	1	—	1	1	·16	454·5	45·45	45·45	7·27	2·65	5·84
	Garrison Staff and Departments -	—	27	8	1	—	1	—	·27	296·3	37·04	—	10·00	3·65	12·32
	Cape of Good Hope and St. Helena.														
6th	Dragoons - - - -	1	415	427	18	—	18	24	43·04	1028·9	43·37	57·83	103·71	37·85	36·79
7th	Hussars - - - -	1	192	157	13	—	13	6	11·08	817·7	67·71	31·25	57·71	21·06	25·76
	Royal Artillery - - -	—	410	278	3	—	3	15	24·67	678·0	7·32	36·58	60·17	21·96	32·39
	Royal Engineers - - -	—	156	108	5	—	5	4	8·04	660·3	32·05	25·64	51·54	18·81	28·49
1st	Welsh Regiment - - -	1	744	577	18	—	18	33	51·01	775·5	24·19	44·35	68·56	25·02	32·27
2nd	Northamptonshire Regiment -	3	510	305	2	—	2	8	19·02	598·0	3·92	15·69	37·29	13·61	22·76
3rd	King's Royal Rifles - - -	3	103	47	2	2	4	3	1·74	456·3	38·83	29·12	16·89	6·17	13·51
1st	Argyle and Sutherland Highlanders	3	837	565	3	—	3	30	41·61	675·0	3·58	35·84	49·71	18·14	26·88
2nd	Connaught Rangers - - -	3	148	57	2	—	2	1	2·89	385·1	13·51	6·77	19·53	7·13	13·51

Brigade or Battalion.	Corps and Commands.	Completed Years of Service in Foreign Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
					In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.		
	CAPE OF GOOD HOPE AND ST. HELENA—*cont.*													days.	days.
2nd	Wiltshire Regiment	3	44	47	—	1	1	—	3·67	1068·2	22·74	—	83·41	29·44	28·50
	Other Corps	—	204	67	2	—	2	4	6·83	328·4	9·80	19·60	33·43	13·20	37·15
	Garrison Staff and Departments	—	181	117	6	—	6	6	10·55	646·4	33·15	33·15	58·29	21·27	33·91
	MAURITIUS.														
	Royal Artillery	2	94	148	1	—	1	2	5·73	1574·5	10·64	21·28	60·96	22·25	14·13
2nd	Northamptonshire Regiment	1	268	774	3	—	3	6	30·03	2888·1	11·19	22·39	112·05	40·90	14·16
	Garrison Staff and Departments	—	20	24	1	—	1	1	·60	1200·0	50·00	50·00	30·00	10·95	9·13
	CEYLON.														
	Royal Artillery	6	203	194	—	—	—	9	10·04	955·6	—	44·33	49·46	18·05	18·30
1st	Royal Dublin Fusiliers	4	763	984	8	—	8	47	53·17	1289·6	10·48	61·60	69·37	24·96	19·35
	Garrison Staff and Departments	—	24	7	—	—	—	—	·14	291·7	—	—	5·83	2·13	7·30
	CHINA AND THE STRAITS SETTLEMENTS.														
	Royal Artillery	6	178	198	3	—	3	14	9·78	1064·3	16·85	78·65	54·94	20·05	18·49
	Royal Engineers	—	24	13	—	—	—	—	·33	541·7	—	—	13·75	5·02	9·26
2nd	East Kent Regiment	3	715	669	4	—	4	47	36·76	935·7	5·59	65·73	51·41	18·76	20·05
1st	Royal Inniskilling Fusiliers	4	706	691	3	—	3	23	36·04	982·9	4·27	32·72	51·26	18·71	19·03
	Garrison Staff and Departments	—	43	19	—	—	—	3	·86	441·9	—	69·77	20·00	7·30	16·52

APPENDIX.

APPENDIX No. I.

MEDICAL REPORT OF THE EASTERN SOUDAN EXPEDITIONARY FORCE, 1884.

By Brigade Surgeon E. G. M'Dowell, C.B., late Principal Medical Officer.

On the night of the 12th February 1884 telegraphic instructions were received from the Horse Guards by the General Officer Commanding in Egypt, ordering the despatch of a force under the command of Major-General Sir Gerald Graham, V.C., K.C.B., to the Eastern Soudan for the relief of Tokar. The troops, it was stated, would probably be back in Egypt in the course of three weeks. Wheeled transport was prohibited, tents were to be taken to the port of disembarkation only; the troops would bivouac during any subsequent operations, and the baggage of all ranks was to be on the lowest scale.

In a local General Order dated Cairo, 13th February 1884, the following troops were to be held in readiness to proceed to Suakin:—

19th Hussars.
6/1 Royal Artillery.
26th Company Royal Engineers.
The Mounted Infantry Corps.
1st Battalion Royal Highlanders.
3rd Battalion King's Royal Rifles.
1st Battalion Gordon Highlanders.
Detachments Commissariat and Transport Corps.
Army Hospital Corps and Ordnance Store Corps.

This force was to be further augmented at Suakin by the 10th Hussars, the 2nd Battalion Royal Irish Fusiliers, and a battalion of the Royal Marines. A small contingent of about 150 Blue Jackets, constituting "the Naval Brigade," and the 1st Battalion of the York and Lancaster Regiment joined the force before the first engagement at El Teb; and when the sea base was changed from Trinkatat to Suakin, the force was joined by M/1 Royal Artillery, a battery which had been disembarked on its way from India to England.

The detail of medical officers and Army Hospital Corps was as follows:—

1 brigade surgeon (local rank of deputy surgeon-general),
3 surgeons-major,
10 surgeons,
1 officer and 67 non-commissioned officers and men of the Army Hospital Corps.

Somewhat unfortunately, in view of a reduction of the Army of Occupation in Egypt, and with the concurrence of the Medical Department, the Ordnance Department had sent to England a large quantity of the field hospital equipment remaining after the Egyptian Campaign of 1882, and only one movable field hospital could be equipped for present use.

The prohibition as regards wheeled transport was relaxed in favour of the water carts of regiments and of ambulance waggons, and four of the latter, all that could be spared from Egypt, were embarked by the Ordnance Department for use during the expedition, supplemented by two more, *ex* steamer "Loch Ard" sent from England. These last did not reach Suakin until some days after the Battle of Tamaai.

The telegraphic instructions for the campaign directed that each regiment or corps was to carry four stretchers per troop or company.

The above, with the addition of nine pairs of cacolets and same number of litters was the only possible provision that could be arranged for sick trans-

port prior to the despatch of the force. The transport for the army and the army itself had to be despatched immediately if Tokar were to be relieved.

An adequate supply of medical and surgical stores was collected and packed, and instructions were given for an exact counterpart of these stores to be taken in hand and despatched for use on receipt of letter or telegram.

Each regiment or unit before leaving Egypt was supplied with a pair of field panniers, and a field companion. Two dresser haversacks and four water bottles were added to this equipment when the force had concentrated at Trinkatat. A dresser haversack and a water bottle were carried by each of the detachment Army Hospital Corps on the advance of the force.

Provision was made for the probability that the portion of the force from Aden and India would not be provided with medical or surgical equipment, and that was the case. They had no equipment.

Only grey clothing was worn during the campaign by the troops from Egypt. Those from India were clothed in khakee, and had puttee leggings, which had been improvised, for the most part, during the voyage. The khakee looked cleaner and cooler, but it is more than doubtful if it is as suitable, even for a very hot climate, as the grey, particularly when men have to bivouac.

The puttee leggings are desirable additions to the dress of cavalry or infantry on active service.

The scale of ration was as follows :—

Preserved meat, 1 lb., or fresh, 1¼ lbs.
Bread, 1¼ lbs., or biscuit, 1 lb.
Tea, ⅛ oz.
Coffee, ½ oz.
Sugar, 2½ oz.
Salt, ½ oz.
Pepper, $\frac{1}{16}$ oz.
Potatoes or fresh vegetables, ¼ lb., or compressed 1 oz.
Water per man, ¼ gallon.

And on those days when authorised in general orders, $\frac{1}{64}$ gallon rum, lime juice ½ oz., with ½ oz. sugar extra.

It may here be remarked that the commissariat supplies were very good, particularly the bread, which was excellent. Fresh meat and bread was the rule throughout the campaign, preserved meat and biscuit being generally issued only on the line of march.

A very varied and sufficient supply of medical comforts was arranged to be taken for the expedition. These supplies, also, were very good.

The field hospital equipment, and the whole of the medical and surgical stores of the expedition, left Cairo by train for Suez on the 16th February, and sailed in the ss. "Rinaldo" on the 18th. Care was taken to have the equipment and stores separately stowed so as to be readily disembarked.

The Major-General commanding the expedition, with his head-quarter staff, left Cairo for Suez on the following night (17th), and embarked next day on board the "Zag-azig," a small Egyptian postal steamer.

At Suez the Surgeon-General, Egypt, had already ordered the establishment of a hospital, utilising the very excellent wooden huts, originally built by the Indian Government for the purpose, and this hospital was being at once equipped for 60 beds, to be increased to 200 when equipment should arrive from England. The hospital at Suez was peculiarly well placed for the wants of the expedition. It was within three days' steam of Suakin and Trinkatat, and the climate has generally been deemed the best in Lower Egypt, particularly at the season during which the operations were carried on.

The "Zag-azig" did not arrive at Suakin until 9.15 a.m. on the 22nd February, having lost 12 hours in consequence of not reaching that port in time the previous evening. On account of reefs the port can only be entered by daylight.

In communication with his Excellency General Baker Pasha, I was informed that he had organised a party of 200 blacks (volunteers) to act as stretcher-bearers. These men were to have been sent to Trinkatat (where the force was concentrating) that day, but there was no sea transport for them. They were to be embarked by the first opportunity.

It may here be mentioned that news reached Trinkatat on the evening of the 25th February that they had mutinied, and positively refused to embark.

The "Zag-azig" reached Trinkatat at 4.30 p.m. The Royal Highlanders had already disembarked for the protection of two steamers employed in condensing water, and were under canvas, occupying a large entrenched camp which had been made by his Excellency General Baker Pasha a few weeks previously.

Here the whole force was concentrated by the 28th February, a total of about 4,500 officers, non-commissioned officers and men, and 200 natives.

A case of small-pox (Gordon Highlanders) had been landed *ex* "Neera" at Suakin, and was treated under canvas on a small adjacent island by the navy, attended by an orderly of the Army Hospital Corps. Another case was reported (Gordon Highlanders) at Trinkatat on the 22nd February, on board the China mail steamer "Thibet." The regiment was recommended to be at once landed, and the case left on board.

A third case of small-pox occuring in a man of the regimental transport, Royal Highlanders, *ex* shipwrecked steamer "Neera," was reported on the 24th February on board the "Hecla."

These two last cases were finally landed and put under canvas on a spit of ground about a mile to leeward of the camp and attended daily by an officer of the Army Medical Department.

When the time arrived for leaving Trinkatat they, their tents, attendants, &c., were put on board a native dhow and towed to Suakin by one of the transport steamers. There they joined the case first named, and were treated for some time by the navy, afterwards by us, until discharged prior to the return of the expedition to Suez.

The ss. "Rinaldo" with field hospital equipment, medical and surgical stores, and Army Hospital Corps, arrived at 12.30 p.m., 23rd February, and disembarkation commenced at 3.30 p.m.

At 11.30 a.m. next day the stores and equipment had been landed, the tents pitched and ready for the reception of patients.

The camp was very healthy, only about six cases of trifling nature under treatment. Most of the troops were under canvas on the afternoon of the 24th.

On the 25th February the 1st Battalion Gordon Highlanders and 2nd Battalion Royal Irish Fusiliers left camp Trinkatat at 10 a.m. to occupy a position (Fort Baker) about 3 miles off, in the direction of El-Teb. The men carried their great coats and 100 rounds of ammunition, their blankets were carried by the commissariat; a tent with a supply of medical comforts, for the use of any sick, was placed at the disposal of the senior medical officer.

The camp equipage of the regiments was returned into store.

On the 27th February H.M.S. "Orontes" was appointed as a hospital ship for the expedition, and arrangements were made with the naval authorities and the commissariat to equip for 300 beds. The requisite medical and surgical stores were supplied from the base.

A careful medical inspection of the whole of the troops was made, and all weakly men were weeded.

Immediately after the men's dinners, on the 28th February, the force marched from Trinkatat for Fort Baker, viz.:—

1st Infantry Brigade and Royal Engineers at 2 p.m.

2nd Infantry Brigade and Naval Brigade at 2.30.

Cavalry at 3 p.m.

Camel battery at 3.30 p.m.

Heads of departments were directed to make their own arrangements for moving their men to the front.

Infantry carried 100 rounds of ammunition, otherwise officers and men were ordered to move out as light as possible.

The equipment and medical and surgical stores and medical comforts to form a dressing station, together with water, for the sick only, carried on 12 camels and 12 mules, with Quartermaster Enright and 38 non-commissioned officers and men, Army Hospital Corps, under Surgeon J. Prendergast, left Trinkatat immediately in rear of the 2nd Brigade at about 2.40 p.m. The cacolets and litters, with the stretchers carried by each regiment and corps,

and a small number brought by the detachment, Army Hospital Corps, constituted the sick transport. In addition 100 mules under Major Foster, Duke of Cornwall's Light Infantry, with drivers, were to be placed at the disposal of the department on the 29th.

With regard to the litters it may be remarked that, practically, they were useless. It would have been dangerous to use them for the class of cases for which they are intended unless carried by specially trained mules. For cavalry cacolets on mules are a mistake. The mules cannot keep pace with cavalry.

The cacolets should be on horses, those used for the band might be trained in time of peace to carry them. Wounded troopers were as a rule brought in on their horses between two comrades.

The route to Fort Baker was through a salt marsh, very difficult in many places, men sinking up to their knees, and horses sometimes to their girths in the thick mud, but the force arrived without casualties and bivouacked outside the fort for the night. The 1st Battalion York and Lancaster Regiment, which disembarked from H.M.S. "Serapis" in the afternoon, joined the force about 8 p.m. The Medical Officer in charge had been directed to obtain stretchers at Trinkatat, and field panniers and a mule were handed over to him at Fort Baker.

A rum ration was recommended for issue that night.

Towards daylight of the 29th there was a heavy downpour of rain which, in addition to soaking everyone in camp, rendered the ground somewhat heavy and slippery for marching.

The dressing station equipment (with 1 officer and 11 non-commissioned officers and men, Army Hospital Corps) was left at Fort Baker under Surgeon Prendergast, who was ordered to be in immediate readiness to move to the front, on receipt of signal or a written message.

A detachment of 27 non-commissioned officers and men under the command of Surgeon H. O. Stuart accompanied the force. The sick transport brought on consisted of the cacolets and stretchers only. Water for the use of wounded was brought by mule carriage.

A general order had directed that during the advance all casualties must be taken forward with the force (until after an action had been fought) with the aid of any transport placed at the disposal of the Medical Department. Should this fail, officers commanding regiments and corps must arrange to have them taken regimentally.

At 8 a.m., 29th February, the troops advanced in square formation, carrying their ammunition, one day's ration, and their great coats or blankets, at discretion of officers commanding. Cavalry covered front and flanks. We marched, with occasional halts, until about 11.20 a.m., when the enemy, strongly posted on our left flank, opened on us with case, shell, and rifle fire.

The case pattered, inside the square chiefly, like hail; the shell for the most part passed over our heads, bursting some distance beyond us.

Within a few minutes we had a great number of wounded and some killed. The wounded were immediately attended to. Medical officers of corps accompanied the men to the ever-shifting dressing point in charge of Surgeon-Major W. D. Wilson, P.M.O., Infantry Brigades.

The troops, always in square formation, were continually changing ground and altering the line of advance, and the wounded had to be carried within the square to avoid being cut off. The military movements could not be delayed even for the wounded, and I have much satisfaction in stating that not a wounded man was left outside the square. If, from the hurried nature of the advance, a wounded man was temporarily outside the square, a medical officer and his stretcher party was with him until brought in. As a rule it was impossible to get more than two bearers for a stretcher, and sometimes not more than one, in which case medical officers and non-commissioned officers cheerfully helped to carry the wounded themselves. This state of affairs lasted until the end of the engagement (between 2 and 3 p.m.), when the wounded were grouped, by regiments and corps, near the wells of El-Teb. The medical officers of the force were all in attendance on them, administering medical comforts and re-adjusting dressings or supplying sedatives to alleviate suffering.

Surgeon Prendergast was signalled to bring on the dressing station equipment, and arrived at 6 p.m.

The tents were at once pitched, and all the serious cases were placed in them. The slight cases slept on stretchers in the open, but were all supplied with blankets.

During the entire night medical officers remained with the wounded, and administered such medical comforts, from time to time, or medicines, as were deemed necessary.

Our casualties were 4 officers, 32 non-commissioned officers and men killed, and 14 officers, 146 non-commissioned officers and men wounded.

I signalled to the base to despatch ambulance waggons, stretcher bearers, and other sick transport, as had been previously arranged; and for Surgeon-Major Chapman, and Surgeons Flood and Browne to be detailed to accompany convoys of wounded.

Surgeon-Major Greene was placed in charge of the dressing station on the 1st March; 86 of the less severely wounded were despatched by him to Trinkatat at 3.15 p.m. (same day) in charge of Surgeon Treherne, who took with him an adequate supply of medical comforts and a field companion; 25 of these wounded were carried by native carriers on stretchers, 47 on mules, and the remainder in two ambulance waggons. With regard to the stretchers and the mule carriage there was not the slightest hitch, but the ambulances were delayed in crossing the swamp between Fort Baker and Trinkatat, and did not arrive until 7 p.m. The wounded bore the journey well.

At 2.15 p.m., on the 2nd March, 37 more sick and wounded (sick, three or four rheumatic cases) were sent to the base on stretchers, each carried by four native carriers with a reserve of 14 for casualties. Surgeons Browne, Flood, and Stuart accompanied the convoy. A field companion and an ample quantity of medical comforts was supplied. The patients were all well fed before starting, and the medical officer at Fort Baker had been instructed to have hot soup, &c. ready for them there.

The very serious cases were given an opiate before starting.

Only one wounded remained at El-Teb, a seaman of H.M.S. "Briton," wounded in the head, and too ill to be moved. He died that afternoon at about 4 p.m.

The wounded were embarked on board the "Orontes" and the "Jumna," the more serious cases on board the latter.

Only two capital operations were performed at the dressing station. Surgeon Treherne removal the leg of a sergeant of the Royal Highlanders below the knee on account of compound fracture with arterial hæmorrhage; and Surgeon Stuart removed the leg of a native for compound comminuted fracture. Several bullets were extracted. All serious operative treatment was performed under chloroform.

160 cases of all ranks were entered in the dressing stations admission and discharge book. Of these, 135 were sent to the base, 23 returned to duty, and 2 died.

Half a battalion Royal Highlanders being left to garrison El-Teb at 9 a.m. 1st March, the force again advanced in looser formation for the relief of Tokar. The route was over a country covered with tall scrub and dwarf trees, and the day was oppressively hot. There was some distant firing on our left flank, but no casualties, and only one man fell out, and a few showed evidence of fatigue. We reached Tokar at 4.15 p.m. to find it unexpectedly without defenders.

The troops bivouacked for the night.

On the following day, the 3rd Battalion King's Royal Rifles, and half battalion Royal Highlanders returned to El-Teb and to Fort Baker.

Afafeet, a village about 3½ miles from Tokar was entered by the cavalry; a considerable amount of the property of the European officers of Baker Pasha's ill-fated expedition was found there, also some Krupp guns and a large number of rifles.

On the 4th March Tokar was evacuated, and the rescued inhabitants, including a native, sent to the base for transhipment to Suakin.

On the 5th, the troops had again concentrated at Trinkatat. There had been scarcely any sickness throughout the operations.

On the 5th, under the superintendence of Surgeon-Major Wilson, the wounded on board the "Orontes" were transferred to the "Jumna" along

with the medical officers, detachment Army Hospital Corps, and medical and surgical stores which had been placed on board the former vessel. The transfer was effected safely and without discomfort.

The "Jumna" sailed for Suez at 8 a.m. on the 6th March, Surgeon-Major Venour in charge. All the medical officers (four surgeons-major and two surgeons) who had joined the expedition from India were also embarked.

In addition to the permanent staff a total of 25 non-commissioned officers and men of the Army Hospital Corps were detailed for duty on board, and an ample supply of medicines, including antiseptics and surgical appliances was furnished from the stores of the expedition.

It should be recorded that the Eastern Telegraph Company forwarded telegrams from all wounded officers, non-commissioned officers and men during the campaign free of charge, and this privilege was largely made use of.

The object of the recent operations, the relief of Tokar having been satisfactorily terminated, and Suakin being threatened by large masses of rebels under the Mahdi's lieutenant, Osman Digna. Orders were issued for the immediate re-embarkation of the expeditionary force and its concentration at Suakin.

Preceded by the General Officer in Command, the head-quarter staff arrived at Suakin on the evening of the 7th. Surgeon-Major Connolly, who had embarked at Trinkatat in the "Tor" on the 5th, reported that the camp, was perfectly healthy, and that each regiment had only a few trivial "attending" cases of sickness. The camp of M/1 Royal Artillery and Royal Marines, situated close to Fort Euryalas in or immediately outside the town, though scrupulously neatly pitched and clean, was in a most unsanitary site. This was unavoidable for military reasons.

In concert with the Senior Commissariat Officer and Deputy Assistant Commissary-General Robinson, immediate steps were taken to organise a dieted field hospital. The Surgeon-General, Egypt, had notified that this officer had been detailed for this special duty.

A considerable portion of hospital equipment was still on board the "Orontes" at Trinkatat, but about 70 hospital bed cots, hair mattrasses, blankets, &c. were already being landed. These, together with marquees, tables, easy chairs, and other requisite equipment, were, with the least possible delay, transferred on camels from the landing stage to the site chosen for the hospital, a distance of about a mile, which was to windward of the camp, and in rear of its left flank. Two marquees were immediately pitched for present use, and the hospital was opened on the 11th as a dieted hospital with 75 bed cots all ready, and mattrasses and other equipment to provide, if required, for 204 patients. The Ordnance Department had an abundant supply of hospital marquees and other tents, so there was absolutely no difficulty about tentage.

The movable field hospital, medical and surgical stores, and the Army Hospital Corps under command of Surgeon-Major Catherwood from Trinkatat disembarked from the "Oakdale" at 8 p.m. on the 9th.

The reserve medical and surgical stores from Cairo, shipped at Suez in the "Utopia," were landed on the 9th and 10th, and with the movable field hospital equipment and stores from Trinkatat carried to the stationary camp hospital.

An advance towards Tamaai having been determined, a careful medical inspection of the whole force was made, and all weakly men were eliminated. Field panniers of regiments and corps were replenished; six Indian tents and the special medicines and surgical appliances laid down in the advance from Trinkatat, with an abundant supply of medical comforts, were placed at the disposal of the Principal Medical Officer, Infantry. To carry these stores, &c. and 120 gallons of water for the sick only, 12 camels and 12 mules were employed. For sick transport, in addition to the cacolets, there were three ambulance waggons (six mules and three drivers each) and 50 pack mules with drivers; regiments and corps carried their stretchers as heretofore. Previous to leaving Suakin I saw the Admiral with reference to a hospital ship. He informed me that he proposed to clear the hired transport "Utopia" for this service. This was accordingly done; hospital equipment was put on board by the Commissariat, and a supply of medicines, &c. by the Principal Medical Officer at the base. She was not used; the excellent stationary field hospital

sufficed for all requirements, and the force was healthy and the time too brief for the accumulation of many sick.

On the 10th, at 6.30 a.m., the 1st Brigade Royal Highlanders, accompanied by two guns and a few Engineers, marched in the direction of Tamaai to form an entrenched camp about 9 miles off (No. 1 zariba) and a water depôt.

The day was sultry, and upwards of 40 men fell out. There were only five cases attributable to heat, and they were not of a serious nature.

The remainder of the force, with the exception of the cavalry which followed next morning, marched for the 1st zariba at 6 p.m. on the 11th March. A bright moon was shining and the temperature was pleasant.

Leaving a company of the Royal Highlanders and a company of the King's Royal Rifles (a medical officer was also temporarily detached to attend to two sick officers and a few men) the force advanced from the 1st zariba at 1.15 p.m. on the 12th, a distance of seven miles, and arrived at their camping ground (where No. 2 zariba was formed) at about 5 p.m.

We were greeted by the enemy on arrival with rifle fire at long range, immediately silenced by three or four shots from our 9-pounder guns. The troops bivouacked inside the zariba.

Until 12.45 next morning the camp was quiet (a beautiful moonlight), but from that hour until daybreak there was an almost constant Remington fire into and over our camp. Singular to relate, our casualties were few, viz.: a man of the York and Lancaster Regiment killed, one officer and one man of the Gordon Highlanders slightly wounded, and a man of the King's Royal Rifles dangerously wounded. Some horses and mules were wounded, and some killed.

The General Officer Commanding having decided that no transport animals should march with the force, I left at the 2nd zariba, in charge of Quartermaster Enright, A.H.C., the field hospital equipment, most of the pack mules, and the ambulance waggons. I took with me the cacolets and 10 pack mules for sick transport, a mule carrying water for wounded, a pair of field panniers, and a box of antiseptic dressings with an extra supply of bandages and surgical appliances. Each corps had its medical officer and field panniers, and the detachment Army Hospital Corps carried their dresser haversacks and water-bottles. The transport was placed in charge of Captain Quirk, Welsh Regiment, under the immediate direction of the Principal Medical Officer, Infantry Brigade, Surgeon-Major Wilson. Surgeon H. O. Stuart, who had been left at No. 1 zariba, had been ordered to come on at once to No. 2 zariba, and arrived in time to assist in dressing the wounded.

Two companies of the Gordon Highlanders being detailed to guard the Zariba the troops advanced at 8 a.m., two squares in echelon flanked by cavalry, and were very soon hotly engaged by the enemy, particularly the square of the 2nd Brigade, and our casualties became numerous. When the stress of the attack was over and the enemy in sullen retreat, the wounded were sent back on stretchers, under infantry escort, in charge of Surgeon R. V. Davies, to No. 2 zariba, where Surgeon-Major B. B. Conolly, Principal Medical Officer of the mounted troops, was already attending to wounded that had been sent to the rear earlier in the day from the 2nd Brigade.

An advance took place of the 1st Brigade over hilly rocky ground to Osman Digna's camp and the wells at Tamaai, a distance of about two miles. Dropping shots fired by the enemy from the surrounding hills continued, and caused a few trifling casualties. These were brought on by the cacolets, pack mules, and a few on stretchers.

About 3 p.m. the force began to return to the camping ground of the previous night, the wounded were then under canvas, and all appliances for their comfort and treatment were in operation.

On the morning of the 14th I signalled to the Commandant of the 1st zariba to pitch tents for 100 wounded, and arranged for an adequate supply of medical comforts to be ready for them when they should arrive there.

Immediately after the action the Admiral had signalled the offer of 200 "blue jackets" from Suakin to act as stretcher bearers, and they arrived at 8 a.m. on the 14th.

Opportunely, the "Jumna" had returned from Suez, and I thought it advisable that the wounded should be embarked on board direct, instead of, in the first instance, being sent to the field hospital at Suakin.

At 2.30 p.m. on the 14th the wounded and a few sick started on their return journey, accompanied by four medical officers, and escorted by half a troop 19th Hussars and two companies of the Royal Highlanders.

The whole of the field hospital equipment and the Army Hospital Corps also left. Indeed, the wounded with escort were the last to leave the camp, the rest of the force, after blowing up a lot of small arms and ammunition found stored near Tamasi, had all marched or were marching Suakin-wards.

The means of transport (sick) were as follows:—56 on stretchers, three ambulance waggons, full, and the remainder on pack mules. The cacolets and other mule transport I left with the force under the Principal Medical Officer, cavalry, to pick up any stragglers on the line of march.

The sailors did their best most willingly, but many of them were footsore, and all were fatigued, even before starting, and I gladly obtained from the Officer commanding the escort the services of nearly a company of the Royal Highlanders. But the day was hot, the march necessarily slow and tedious, and dreading that darkness would come on before we could arrive at our halting place. I despatched an hussar to the Commandant of the first zariba for a fatigue stretcher party of 200 men, who were at once sent out, and we reached our tents just at dusk.

The wounded bore the journey admirably. Having secured the services of a fatigue party (stretcher) of 300 men, in addition to the sailors, and all the wounded having previously had arrowroot or beef tea, we started again at 6.30 a.m., 15th March, but under much more favourable circumstances than on the preceding day. At the landing pier, Suakin, two tents had been pitched for protection from the sun, and there was an abundant supply of medical comforts.

The embarkation on board the "Jumna" commenced immediately, the stretcher cases on their stretchers in flat-bottomed horse boats with plenty of hay, and was completed by about 12 noon, without misadventure or suffering to the wounded. 88 sick from the field hospital, Suakin, were embarked on board the "Jumna" on the previous evening.

The "Jumna" left for Suez at noon next day (16th). She had on board the same staff of medical officers and of Army Hospital Corps as was detailed when she carried the "El-Teb" wounded.

A demonstration in the direction of the Suakin-Berber caravan route being deemed advisable, the 19th Hussars, mounted infantry, and the Gordon Highlanders and headquarters of the Cavalry Brigade marched on the 18th to Handoub, a distance of 12½ miles, to form a camp, No. 3 zariba.

An ambulance waggon and three pairs cacolets accompanied the small force, also a non-commissioned officer and private of the Army Hospital Corps.

Surgeon-Major Conolly, P.M.O., Cavalry, was instructed to send all but trivial cases of sickness to the hospital at the base; and to have sentries placed over the wells there,—a rough analysis of the water by Surgeon-Major W. Catherwood having demonstrated the presence of considerable quantities of chlorides, chiefly of common salt and chloride of magnesium.

It may be noticed that the water at Tamasi, the running stream at Tamanieb, and the wells for 20 miles on the Berber road beyond Handoub, were all brackish.

The troops therefore, were restricted throughout to condensed water for drinking and cooking purposes, and to this purity of water supply it is manifest we were indebted to the marked immunity from serious disease which has been our fortunate experience.

In communication with the Senior Ordnance Store Officer and the Assistant Adjutant-General of the Force, and with relation to the "Loch Ard" which had arrived from England with the equipment of a stationary field hospital and every requisite to enable it to be formed into a dieted hospital, it was decided for the present not to land the stores, excepting those such as refrigerators, water and supply carts, green gauze, &c., which might be of much service at the dieted hospital already established.

Subsequently light tip or forage carts were disembarked and two ambulance waggons, and were of great use in the after operations.

For ambulance waggons there was only mule draught. Each ambulance waggon should have at least four horses and two drivers.

With six horses and three drivers an ambulance waggon could go wherever

artillery or cavalry could travel; but the animals should be reserved solely for sick transport and should have no other work.

The exigencies of this campaign necessitated the employment of the transport animals for every kind of work. No animals could be set apart for special services, and therefore the mules, &c. supplied for the ambulances, though the best that could be furnished by the Commissariat Department, were often tired or overworked before starting.

The ambulance waggons would be improved by having broad tires to the wheels.

The advent of the "Lock Ard" gave to the expedition what was much required, viz., ice. There was an ice chamber on board, and the ship was able to make and supply daily more than was absolutely required.

Information having been received that Osman Digna was again collecting a force at Tamanieb, about 25 miles off. I was informed by the Assistant Adjutant-General on the 22nd March, that another expedition against him was contemplated. Accordingly on the 23rd a company of the Royal Irish Fusiliers, with a convoy, marched a distance of 11½ miles towards Tamanieb, to form a zariba (No. 4), and to establish a water depôt.

The force was ordered to move to the front on the 25th, to be joined at No. 4 zariba by the troops then at Handoub.

It was originally intended that the march from Suakin should begin at 7 a.m.; but the general officer commanding had ridden out to No. 4 zariba on the previous morning and found that the afternoon heat was much more bearable, and the hour was changed to 2 p.m. The following was the sick transport, &c. taken with the force:—4 ambulance waggons, 8 two-wheeled carts, 30 pack mules, and the cacolets, and a portion of the movable field hospital equipment, including six Indian tents. A separate cart carrying a large supply of ice, and water and ice were carried in the ambulance waggons, and there were two water carts.

A detachment of 34 non-commissioned officers and men, Army Hospital Corps, was detailed for the advance.

Any wind there was followed the column and the day was hot, and within a mile of the starting point fully 50 men fell out and were sent back to the base. This went on throughout the march until towards evening, and it was with much difficulty that the stragglers were collected and brought on. However, the 4th zariba was reached at 8.30 p.m., and of 130 men picked up, 126 joined their regiments the same night; only four remained under medical treatment Of 46 men who presented themselves from the march at the field hospital, Suakin, only seven were detained for the night, and none were admitted.

There was indeed no case of genuine heat apoplexy under observation. The troops bivouacked for the night at No. 4 zariba.

On the 26th the cavalry marched in the direction of Tamanieb at 9 a.m., followed by the Gordon Highlanders, Royal Irish Fusiliers, and Artillery, at 10 a.m. The Marines, escorting a convoy, were to leave at 11 a.m. Quartermaster Enright, Army Hospital Corps, was left in charge at No. 4 zariba of most of the hospital equipment, with instructions to follow should the remainder of the force there (three regiments) receive orders to advance.

The sick transport (to follow with the convoy and Marines) was an ambulance waggon and four two-wheeled carts.

With the Gordons, Royal Irish Fusiliers, artillery, and the cavalry, were brought on two ambulance waggons, four two-wheeled carts, the cacolets, and 20 pack mules, and ice, a water-cart, and a box of special medical and surgical appliances.

Twenty non-commissioned officers and men, Army Hospital Corps, accompanied the advance. The march was continued for about 7 miles in heliographic touch of the cavalry.

The latter, having ascertained the position of the enemy, retired, and the infantry returned about a mile and a half to a site chosen as a camp, where they formed No. 5 zariba. Here they were joined, at 8 p.m., by the Royal Highlanders and the King's Royal Rifles, who had been ordered up from No. 4 zariba.

During the march of the Gordons and the Royal Irish Fusiliers, 50 men, fell out of the ranks, but most of them rejoined their regiments after being carried for a time, and there were no serious cases.

The force bivouacked for the night, and paraded and marched at 5 a.m. on the following day (27th March), 1st brigade leading, followed by 2nd brigade, both in square formation; mounted troops in advance and on flanks.

We marched about 9 miles over most difficult, hilly ground.

The enemy opened a feeble rifle fire at about 9 a.m., which was quickly silenced by a couple of 9-pounders and mounted infantry fire, and we reached a running stream, most welcome for the cavalry and pack animals, who had been without water for many hours. The cavalry, supported by infantry, advanced about a mile up-stream, and burnt Tamanieb.

We had no casualties, and marched back to No. 5 zariba, where we arrived, at about 4 p.m.

The sick transport on this occasion consisted of four two-wheeled carts, the cacolets, and 20 pack mules, two Indian tents on camels, water on mule, ice and special medical and surgical appliances were also brought on. Ten non-commissioned officers and men of the Army Hospital Corps accompanied the force.

Not a man fell out of the ranks during the advance, and during the return march only 12 men required carriage.

Leaving Surgeon-Major Wilson in medical charge of the force, I rode back with the head-quarters to Suakin. The mounted troops also returned the same night, followed by most of the infantry on the next day. The last detachment arrived at Suakin on the 29th. For the return journey, in concert with the Senior Commissariat Officer, every available cart and mule was placed at the disposal of the Principal Medical Officer, with the infantry, at No. 4 zariba, for sick transport, should he require it, and there was a superabundance of ice.

The campaign was over, and orders were issued for the immediate embarkation of the troops and stores of the expedition.

The whole of the sick (five officers and 80 non-commissioned officers and men) from the stationary field hospital were embarked on the 29th March in the "Jumna" along with the M/1 Royal Artillery, 10th Hussars, York and Lancaster Regiment, and the Royal Irish Fusiliers.

The stationary hospital was closed from the 30th March, and the equipment handed over to the Commissariat and Ordnance Departments. From that date any sick were treated regimentally, and embarked with their corps.

The movable field hospital equipment, the medical and surgical stores, and the detachment of the Army Hospital Corps were embarked on board the hired transport "Utopia" on the 31st.

The remainder of the force, excepting the Marines and the King's Royal Rifles, who were to remain at Suakin until one of the transports should return from Suez, and with whom were left Surgeons C. P. Turner and A. V. Lane, were embarked in H.M.S. "Orontes" and in six hired transports, each with a medical officer in charge furnished with field panniers.

The last of the expeditionary force, excepting the Rifles, as previously mentioned, reached Suez on the 6th of April.

TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, and DEATHS, from February 15 to April 6, 1884, with the Ratios per 1,000 of the Strength.

Average Strength, 4,018. — DISEASES.	Admissions into Hospital.	Deaths, including Killed in Action.	Ratio per 1,000. Admissions.	Ratio per 1,000. Deaths.
CLASS I.—GENERAL DISEASES.				
Febrile Group:				
Eruptive fevers	2	—	·50	—
Continued	39	—	9·70	—
Yellow fever	—	—	—	—
Paroxysmal fevers	8	—	1·99	—
Cholera	—	—	—	—
Other diseases	—	—	—	—
Total of febrile group	49	—	12·19	—
Constitutional Group:				
Rheumatism	11	—	2·73	—
Primary syphilis	35	—	8·71	—
Secondary ,,	1	—	·25	—
Tubercular diseases	—	—	—	—
Scurvy and purpura	—	—	—	—
Other diseases	—	—	—	—
Total of constitutional group	47	—	11·69	—
CLASS II.—LOCAL DISEASES.				
Diseases of the—				
1. Nervous system	21	—	5·23	—
2. Eye	3	—	·75	—
3. Ear	4	—	1·00	—
4. Nose	—	—	—	—
5. Circulatory system	—	—	—	—
6. Absorbent ,,	6	—	1·50	—
7. Ductless glands	—	—	—	—
8. Respiratory system	12	—	3·00	—
9. Digestive	67	—	16·67	—
10. Urinary system. Gonorrhœa	5	—	1·24	—
10. Urinary system. Sequelæ of gonorrhœa.	1	—	·25	—
10. Urinary system. Other diseases	4	—	1·00	—
11. Generative system	2	—	·50	—
12. Organs of locomotion	3	—	·75	—
13. Cellular tissue	14	—	3·48	—
14. Cutaneous system	23	—	5·72	—
CLASS III.				
Debility	10	—	2·48	—
CLASS V.				
Injuries:				
1. General	—	—	—	—
2. Local	43	—	10·70	—
3. In action	198	126	49·27	31·36
General total	513	126	127·42	31·36

CLASSIFIED RETURN of WOUNDS and INJURIES received in Action during the Period ending April 6, 1884.

Dates of Action.	29th February 1884.	13th March 1884.
Places of Action.	Bir-el-Teb.	Tamaai.

Regions of the Body Wounded or Injured.	Killed in Action.	Admissions, with Wounds and Injuries.						Deaths in Hospital consequent on Wounds or Injuries received in Action.					
		Total Wounded or Injured.	Projectile or Weapon by which the Wounds or Injuries were inflicted.					Total Deaths from Wounds or Injuries.	Projectile or Weapon by which the Wounds or Injuries were inflicted.				
			Case Shot or Shell.	Rifle Shot.	Sword.	Spear, Knife, or Bayonet.	Other Injuries.		Case Shot or Shell.	Rifle shot.	Sword.	Spear, Knife, or Bayonet.	Other Injuries.
I. Commissioned Officers:—													
1. Wounds of the head - -	1	2	—	—	1	—	1	—	—	—	—	—	—
2. Wounds of the face - -	—	—	—	—	—	—	—	—	—	—	—	—	—
3. Wounds of the neck - -	1	1	—	1	—	—	—	—	—	—	—	—	—
4. Wounds of the chest - -	1	2	—	—	—	2	—	—	—	—	—	—	—
5. Wounds of the abdomen -	—	1	1	—	—	—	—	—	—	—	—	—	—
6. Wounds of the back and spine.	—	1	—	—	—	1	—	—	—	—	—	—	—
7. Wounds of the perinæum and genital and urinary organs, not being wounds of the peritoneum.	—	—	—	—	—	—	—	—	—	—	—	—	—
8. Wounds of the upper extremities.	3	7	1	3	—	1	2	—	—	—	—	—	—
9. Wounds of the lower extremities.	—	6	—	3	—	1	2	—	—	—	—	—	—
10. Wounds with direct injury of the large arteries, not being cases of compound fracture.	—	—	—	—	—	—	—	—	—	—	—	—	—
11. Wounds with direct penetration or perforation of the large joints.	—	—	—	—	—	—	—	—	—	—	—	—	—
12. Wounds with direct injury of the large nerves, not being at the same time cases of compound fracture.	—	—	—	—	—	—	—	—	—	—	—	—	—
Total - -	6	20	2	7	1	5	5	—	—	—	—	—	—
II. Warrant Officers, Non-Commissioned Officers, and Men:—													
1. Wounds of the head - -	27	19	2	5	3	7	2	—	—	—	—	—	—
2. Wounds of the face - -	1	14	1	6	3	4	—	—	—	—	—	—	—
3. Wounds of the neck - -	7	6	1	2	1	2	—	—	—	—	—	—	—
4. Wounds of the chest - -	51	10	1	3	—	6	—	—	—	—	—	—	—
5. Wounds of the abdomen -	24	9	—	2	1	6	—	—	—	—	—	—	—
6. Wounds of the back and spine and side.	5	15	—	4	1	9	1	—	—	—	—	—	—
7. Wounds of the perinæum and genital and urinary organs, not being wounds of the peritoneum.	—	—	—	—	—	—	—	—	—	—	—	—	—
8. Wounds of the upper extremities.	8	65	1	36	9	16	3	—	—	—	—	—	—
9. Wounds of the lower extremities.	2	60	8	33	2	11	6	1	—	1	—	—	—
10. Wounds with direct injury of the large arteries, not being cases of compound fracture.	1	—	—	—	—	—	—	—	—	—	—	—	—
11. Wounds with direct penetration or perforation of the large joints.	—	—	—	—	—	—	—	—	—	—	—	—	—
12. Wounds with direct injury of the large nerves, not being at the same time cases of compound fracture.	—	—	—	—	—	—	—	—	—	—	—	—	—
Total - -	125	198	14	91	20	61	12	1	—	1	—	—	—

APPENDIX No. II.

REPORT ON THE HYGIENIC EXHIBITION AT BERLIN, 1883.

By F. DE CHAUMONT, M.D., F.R.S., Professor of Military Hygiene, Netley.

IN accordance with instructions received from the Right Hon. the Secretary of State for War, conveyed to me in a letter from the Director-General of the Army Medical Department, I proceeded to Berlin in the month of August 1883, for the purpose of visiting the Hygienic Exhibition, in order to report upon any exhibits that might be usefully adopted in our service, so far as medical and hygienic appliances went.

The exhibition was a very extensive one, and the catalogue not being very full or clearly arranged, it was somewhat difficult to examine the exhibits exhaustively. Thanks, however, to the kindness of Surgeon-General Coler of the War Office, Berlin, and especially to Staff-Surgeon Sommerbrodt, who accompanied me on several occasions, my work was considerably shortened, although it still took a good many days to make a careful examination. The heat of the weather was also great, and that consequently somewhat interfered with the progress of the inquiry.

After carefully comparing my notes with what has already been made public, either in the Kriegs-Sanitäts-Ordnung or in foreign works on military hygiene, I am sorry to say that there is comparatively little that is new, or that could be usefully adopted in our own service.

Of the particular exhibits of interest, the following seemed to merit especial attention:—

1. The arrangements for conveying sick and wounded in time of war.
2. Certain surgical appliances.
3. Plans of hospitals and barracks.
4. Exhibits of hygienic apparatus.
5. Miscellaneous.

I propose to say a few words on each of these.

1. ARRANGEMENTS FOR CONVEYING SICK AND WOUNDED.

(*a.*) These were very fully represented by the exhibits from the Prussian War Office, as well as the Austrian, Hungarian, Bavarian, &c.: also by the various Red Cross societies, such as those of Hamburg, Altona, Bavaria, Vienna, &c.

Taking first the railway transport of Prussia, the fundamental principle may be said to be the rapid transformation of existing carriages, the ordinary 4th class of the Prussian lines, which are open (that is, not divided into compartments as ours are) from end to end, and the doors of which are at the ends of the carriages. This conversion is very simply and effectually carried out. Stretchers are arranged in two tiers to fit on to a shelf-piece with spiral springs. These stretchers are hardly broad enough, being only 56 centimetres (22 inches). This is improved upon in the Bavarian trains, as will be mentioned presently.

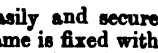
Between each pair of carriages is a folding iron platform, which is used both as a means of communication between the several carriages and also as a means of hoisting up the stretchers. Rails are arranged on the platform, by means of which the stretcher can be pushed on; but the Prussian method is a little clumsy, requiring the stretcher to be turned before it can be got into its place; this also is improved upon in the Bavarian trains.

The ventilation is central through the roof.

There are in each train 30 carriages for sick, who are ten in each carriage. There are, besides, the carriage for the medical officers, one for a surgery and dispensary, two kitchen waggons, &c.

Further details are to be found in the Kriegs-Sanitäts-Ordnung, where detailed illustrations are also to be found.

(*b.*) The Bavarian system has several advantages over the Prussian. The carriages are broader and so are the stretchers, 76 centimetres (30 inches).

For hoisting up the stretchers there are two ingenious improvements. One is, that by means of two supplementary rails laid on the platform the stretchers can be moved on sideways, and so require no turning in order to enter the carriage; the other is an arrangement of resting hooks  which enable the bearers to lift the stretchers more easily and securely on to the platform, and also on to the frame inside. The frame is fixed with springs on what is called the Grund system (das Grundsche system). There is no ridge ventilation as in the Prussian plan, the ventilation being by the doors and windows. Small bed-tables are provided.

(*c.*) The Alsatian train, for the field, differs a little from the previous ones. The carriages are 3rd class, from which the seats are taken out, being made movable on purpose. There is a hook in the wall of the carriage, which in ordinary times folds up flush with the surface of the side. This being let down forms the support of the frame to receive the stretcher. This frame can be folded up for packing. There are two sizes of stretcher, 56 centimetres (22 inches), and 75 centimetres (nearly 30 inches); they are placed in two tiers.

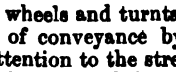
The platform rails are made to fold down, whereas in the Bavarian they are loose, and when not wanted are slid along the side of the carriage.

(*d.*) There were also examples of goods' waggons adapted for the carriage of the sick and wounded. As, for instance, the Hamburg system, in which the stretchers are suspended in double tiers by devil's claws (Teufel's-Klauen) (for drawing, *see* Kriegs-Sanitäts-Ordnung) and the Grundsche system, in which there is a single tier with a fixed frame resting on spring blades on a cross-piece. (*See also* Drawing, Plate IV., Kriegs-Sanitäts-Ordnung).

Transport by Road.

Here, besides the various forms of stretcher and carriage already known, there were exhibited examples of the adaptation of country carts.

In the Hungarian waggons, which are deep with sloping sides brush-wood fascines are used as extempore springs.

In the Prussian service straw is adapted in the same way, and it is also used even for extemporizing stretchers and splints. For severely wounded men two-horse waggons are supplied, containing only two stretchers. The springs of the stretchers are of this shape  .

All the waggons have uniform wheels and turntables.

With reference to the question of conveyance by road, and, indeed of conveyance generally, I may direct attention to the stretcher described in a circular by C. Epner, a translation of which is appended:

Neue federnde Militär Krankentrage. New Spring Military Stretcher, by C. Epner, senior, Berlin, Molkenmarkt, 4.

It claims to be applicable to the transport of wounded under any conditions, either by hand, in railway trains, or in a cart of any description, without any discomfort or injury to the wounded.

"The poles (oil painted) are of welded iron-boiler tubing of 33 millimetres (1·3 inches) total diameter, the strong wall of the tubing being 3 millimetres ($\frac{3}{17}$ inch) thick. They are joined together by means of cross-bars of the same material, which are fastened to them by means of coupling-boxes. Into these hollow poles the iron handles are slid, and in order to prevent them moving backwards and forwards, each of the coupling-boxes has a chuck with an adjusting screw. There is also a second coupling-box attached to each pole which has a hinge at the side, in which a movable head-rest works; this head-rest consists of a piece of hooped iron, having on either side a toothed rod, which, by the action of the teeth over a catch or button, allows the head-rest to be fixed at different angles. On the under side of the coupling-boxes carrying the head-rest, as well as of those at the foot of the stretcher, are placed iron slots into which slide the S-shaped feet, which are made of good spring steel and fastened to their respective coupling-boxes by means of screws.

"When the handles are pushed home, the length of the stretcher is 1·9 metres (6 feet 3 inches). When the handles are pulled out the length is 2·5 metres (8 feet 2 inches). It is 0·54 metres broad (21·25 inches), and weighs, with canvas bottom and head pillow, 18 kilogrammes (39 lbs. 10 ozs.); the height from the lower convex part of the spring foot to the upper edge of the stretcher is 16 centimetres (6·25 inches).

"The canvas is of a strong material; the edges are passed round the poles and provided with leather eyes, through which strong hemp cord is passed crosswise, so as to keep the upper service of the canvas smooth and tight. At the head, the canvas is attached firmly to the cross-bar by means of leather straps.

"What especially distinguishes the stretcher from those hitherto in use, and makes it particularly adapted for the transport of severely wounded men in the simplest and rudest forms of cart, is its spring power, which consists in the construction of the bent steel feet and of the carrying poles. Every shock from below, which acts upon the under convex surface of the foot is not conveyed to the stretcher proper, but is expended in a slight movement of the spring due to the yielding nature of the latter; this diversion of the effect of the shocks is also favoured by the circumstance that the poles themselves are formed of iron tubes, which being hollow act to some extent as springs for themselves. A wounded man who, lying upon one of these stretchers, is carried over uneven, bumpy ground in a common country cart, cannot, in spite of the numerous bumps and shocks which the cart sustains, in consequence of the unevenness of the ground, be shaken backwards and forwards as is the case with the ordinary stretchers in use, but remains in the same position as he assumed when first placed upon the stretcher; transport on such a stretcher is therefore as protective for a badly-wounded man as the best constructed ambulance waggon suspended on the best form of springs.

"To military authorities the use of this stretcher is to be recommended on the following grounds:—

"(1.) The stretcher, being constructed of iron throughout, is certainly more lasting than those made of wood, without their being any materially greater difference of weight.

"(2.) In place of the expensive ambulance carriages which are now provided for the severely wounded, any railway carriage or any cart whatsoever can be employed if the spring stretcher be used; by this means also it will be possible to transport, in a much shorter time than by the present methods, a much larger number of severely wounded men from the dressing station to the field hospital, and thence to the more distant base hospital.

"(3.) The ambulance waggons can be made of much lighter construction than at present, for the spring stretcher with the handles pushed home is about 60 centimetres (23·5 inches) shorter than the one at present in use."*

For bedding, the Prussians use horse-hair or straw, the Austrians wood fibre (Holz-wolle).

One or two convenient forms of stretcher were exhibited in the department of the German Admiralty, such as a bamboo stretcher, which can be conveniently extemporised in the tropics; Nicolai's rattan stretcher, and a fish-net stretcher made at Altona.

There was also a convenient chair for hoisting patients on board ship, consisting of an arm-chair with a bag for the feet. It seemed more comfortable and secure than some of the contrivances in use.

II.—Certain Surgical Instruments and Appliances.

(*a.*) *Instruments.*—The tendency now is to banish all linings from instrument cases, and to have nothing but metal and polished wood, which can be thoroughly and effectually cleaned. The German navy cases were of this description, but in the army the change has not yet been carried out, although, I believe, it is intended.

Professor Esmarch also exhibited some new instruments made of metal throughout in one piece, so as to avoid any crevices in which impurities might

* With regard to the above statements, I may note that the experiments in this country do not appear to have been favourable to spring stretchers hitherto; their value can only be settled by practical trial, and a sample one has been ordered for trial at Netley by Professor Longmore C.B.

lodge. The disadvantage of too great weight might easily be obviated by casting the handles, &c. hollow, The instruments are also nickel-plated to avoid rust.

(*b.*) A convenient form of clinical thermometer is to be found in the Prussian equipment. To prevent it from rolling off the two pieces of brass protect it, and are movable on pins; these being moved aside act as wings to prevent rotation.

(*c.*) *Dressings.*—Two materials attracted attention, viz. :—

(1.) Esmarch's turf (or peat) dressings, which appear to be very successful; they are absorbent and antiseptic, and may be left unchanged for a long time.

(2.) Dr. Walcher's wood wool (Holz-wolle), exhibited by Bruns in Tübingen. The supply is unlimited, and it appears to answer very well.

(*d.*) *Irrigators.*—A simple form was shown, merely a conical vessel, like a lamp reservoir, with a wick conductor.

(*e.*) *Operation tables.*—There were exhibited Mundy's (Vienna) and Schwabe's (Moscow); neither seemed to present any special feature of novelty or convenience.

III.—Plans of Barracks and Hospitals.

The most interesting of these were those of the New Tempelhof Hospital in Berlin, and the barracks and hospital at Albertstadt, Dresden, facetiously designated "Casernopolis."

I took the opportunity kindly offered to me by Surgeon-General Coler of visiting the Tempelhof Hospital, which is very complete. It occupies ground at some distance from the city, in the midst of the vast plain, which is used for military manœuvres, and on part of which the celebrated Tempelhof Hut Hospital was stationed during the war. The buildings are distributed over the ground in separate blocks without being connected by means of corridors. There are three descriptions of buildings for the sick, viz. :—1st. Pavilions, similar to those now so general, such as those which form the Herbert Hospital, &c. 2nd. Blocks (so-called), viz., a collection of small wards for two or three patients each, each opening off a general corridor, the object of this arrangement being to provide accommodation for ordinary cases of illness when few in number. Apparently this is chiefly with a view to economy in fuel in cold weather, so as to obviate the necessity of heating a large ward. 3rd. Isolation wards for cases of infectious disease.

The space allowed per patient in the ordinary wards is 37 cubic metres (1,307 cubic feet), and in the isolation wards 42 cubic metres (1,484 cubic feet); the hourly supply of air in the former being 81 cubic meters (2,861 cubic feet), much too small an amount; and in the latter (isolation) 100 cubic metres (3,532 cubic feet), also much too little. The Hospital is in direct communication with the tramway line, and the patients are brought daily in special carriages, the line furnishing horses and drivers.

I also visited the great civil hospital, the Friedrichshain, where the buildings are distributed in something of the same way, in well-kept grounds full of shrubs and flowers. I gave sometime ago a full description of this hospital in the London Medical Record, translated from the description of Lieutenant Hagemeyer (a. d.), formerly manager of the institution.

Moabit.—There is here a hut hospital for fever cases, and other infectious diseases among the civilian inhabitants of the city. I visited it, but it did not present any features that seemed an improvement on our own. In fact, the wards were overcrowded and the ventilation insufficient.

Barracks and Hospitals at Albertstadt, Dresden.

I also took the opportunity of visiting these interesting buildings. In the absence of my friend, Surgeon-General Roth, Dr. Günther (Geheimer Medecinal Rath) very kindly made the necessary arrangements for obtaining permission from the Minister of War, and I was conducted over the buildings by Staff-Surgeon Sochow, to whom, as well as to others, my thanks are due for their kindness and courtesy.

The accommodation provided for the men is very complete, superior, indeed, to anything of the kind usually supplied. The men have separate rooms for

sitting in during the day, each man being provided with a cupboard to hold his things. I did not quite like the plan of the dormitories, however; they were too large. There were too many rows of beds, and the space seemed insufficient. All the troops were out on manœuvres, so that the barracks were empty at the time of my visit.

As regards the hospital, that is chiefly on the corridor plan, with small wards, as in the so-called "blocks" in the Tempelhof Hospital in Berlin.

A full description of the establishments has been already published by Surgeon-General Roth in his work, Veröffentlichungen aus dem Königlich Sächsischen Militair-Sanitats-Dienst, so that it will be unnecessary for me to give any further detailed account of them.

Tents for Field Hospitals, &c.

The Prussian tent for field hospitals is described and figured in the Kriegs-Sanitäts-Ordnung. It contains 12 beds, which are cots put together from simple pieces of wood cut to regular sizes and shapes, so as to facilitate their construction and make it uniform. They are substantial, and apparently comfortable.

The tent itself has a double cover, the outer of which is made waterproof. Between the two covers of the roof the ventilation is carried on. The pole is of wood.

There are 80 tents of 12 beds each for each corps d'armée.

Doecker's Felt Tent.

Captain Von Doecker, of Copenhagen, exhibited a felt tent, or rather hut, which presents some points of advantage. It is claimed for it that it is easy of erection, more roomy and comfortable, and in consequence of the non-conducting character of the material, much warmer than any tent, and even than any hut, which would take much longer in erecting, and would be much heavier and more cumbersome to carry.

IV.—Exhibits of Hygienic Apparatus.

There was one apparatus which seemed to me to merit attention, and that was the drying apparatus of Oscar Schimmel & Co. of Chemnitz, patented in 1880. The great objections to drying apparatus in general, are the confined air, the absence of ventilation, and consequently the unwholesome and unpleasant smell which clothes have, when dried on the usual horses or screens. In Schimmel's apparatus the ends are quite open, and the articles travel slowly along from one end to the other, there being a free circulation of air through. The temperature is kept at 40° C. (104° F.). I was told that one hour was sufficient for the articles to travel the whole length of the machine, and that on their arriving at the other end they were quite dry. There is no unpleasant smell, and the temperature is such that there is no danger of injuring the fabric.

I would especially draw attention to the advantage of this machine, not merely for drying purposes in the ordinary laundries, but also for drying the men's heavier clothes, great coats, tunics, trousers, &c. It has always seemed to me that the men of the Royal Marine Artillery at Eastney enjoyed advantages in this way that might well be extended to the army generally. In that barrack there is a regular drying room, in which the men coming in wet may have their clothes set at once to dry, so that they need run no risk by putting on damp clothing when they next go on duty. Knowing as we do how often serious illness may follow the wearing of damp clothing, bronchitis, pneumonia, &c., which are only too often the first step towards phthisis, the advantage of this arrangement must be obvious. The drying apparatus at Eastney, however, is on the old principle of sliding horses in a confined atmosphere, but it would be a great improvement if a Schimmel's apparatus were placed in each barrack for the purpose.

The same firm also exhibited a very good disinfecting apparatus worked by superheated steam, a plan which is now much favoured on the Continent, following the advice and researches of Koch.

Reserve Ration for Troops.

This is a most important question, and one that has not been as yet satisfactorily answered. In many cases in the proposed rations where meat has formed a constituent, the fibre has been so dried as to become hard and indigestible, so as to throw too great work upon the digestive apparatus. There was exhibited at the Exhibition, under the name of Carne Pura, a form of preserved meat which seems well adapted for the purpose. It is the invention of Dr. Meinert-Bünau, who is the author of an elaborate work on dietetics, with reference to the use of this preserved meat and its comparative nutritive value. It is prepared in a variety of ways, and may be used as a soup, or mixed with vegetables, or in the form of a cocoa. I had an opportunity of tasting several of the forms, and found them all palatable. I also visited the manufactory, which is at present in Berlin, although it is not unlikely to be removed to some other locality where the raw material of the manufacture is to be obtained more cheaply. At present the Carne Pura is made chiefly from the dried meat from South America, known as Charqui or Tasajos, but the supply has fallen somewhat short of the demand, so that European meat has had to be used in part, thus raising the cost rather above what it is hoped it will be when more complete and extensive arangements can be made.

The substance seems to me to be well worthy of a trial, more especially as the inventor, Dr. Meinert-Bünau, is a scientific man, capable of considering the question from a more correct point of view than if it were merely a commercial speculation.

Hygienic Investigations.

I may refer, in conclusion, to the exceedingly interesting exhibition of apparatus, &c. for hygienic investigations, both in the German Government Pavilion and in the exhibit by Professor Fodor of Buda-Pesth. These consisted in methods of examining the air, both atmospheric and telluric, drinking water, &c., and the cultivation of minute organisms believed to be connected with the propagation of disease. These were carefully explained and demonstrated daily, and from them I have received some valuable hints for future inquiries.

APPENDIX No. III.

REPORT ON THE CHOLERA EPIDEMIC IN EGYPT DURING 1883.

By Surgeon-General JOHN IRVINE, M.D.

On the evening of June 23rd, 1883, a rumour became prevalent in Cairo to the effect that cholera had broken out at Damietta, but the report was not officially confirmed until the afternoon of June 26th, when a letter, of which the following is a translation, was received by the sanitary officer of the Army of Occupation:—

"SIR,

"I HAVE the honour to bring to your notice that a disease of an epidemic type appeared at Damietta on the 22nd instant."

"Two medical commissioners, one acting under the orders of the Conseil de Santé and the other under the orders of the Conseil Sanitaire Maritime et Quarantinaire, have been sent to the place in question for the purpose of reporting on the alleged outbreak of sickness, the result of their investigations has been that they have united in pronouncing the disease to be true epidemic cholera.

"A comparison drawn between the mortality of Damietta for the week ending June 25th, 1882, and a corresponding period this year bears witness to the rapid progress of the malady.

"Prompt and energetic measures have at once been taken to cut off all means of communication between Damietta and the interior, and to isolate and care for the sick. A special medical staff has been appointed for this purpose, and has been supplied with the necessary medicines and disinfectants.

"News was received yesterday by the Conseil de Santé that two cases of cholera had appeared at Mansourah, and two cases have been reported to-day also; this would necessitate the adoption of measures for the isolation of sick persons and infected points in the above-mentioned town also.

"Believe me, &c.,

"(Signed) D. SALEM,

"President of the Board."

From the date of the reception of this letter, daily bulletins of the mortality from cholera were received from the Board of Health by the sanitary officer of the British Army, and from them it may be seen that the disease made slow but sure progress up the eastern branch of the Nile.

Damietta, the town in which, according to official reports, the epidemic first appeared, is situated between the branch of the Nile bearing the same name and Lake Menzaleh, at a distance of about four miles from the sea, and having a population of about 29,000.

This place would appear to afford all the conditions necessary for the spontaneous production of almost any epidemic. It is surrounded on all sides by a network of inundated plains, canals, and lakes, and sloping down to the Salt Lakes, at the mouth of the river, are banks consisting of the foulest mud. In addition to this there are large tracts of rice fields in the immediate

neighbourhood, and sanitation is utterly unknown in or about the town. The houses are very old, ruinous, and overcrowded, for since the cutting of Mamoudiyeh Canal in 1803, and the consequent diversion of trade to Alexandria, Damietta has fallen lower and lower in prosperity and importance. Besides the situation of the town there are several other reasons, particularly this year, which would render the place a hotbed of disease. When the outbreak first took place an annual fair was being held, and, consequently, the already overcrowded population was increased by some 15,000 persons. These 45,000 human beings were eating "fasek" (fish allowed to putrify in the sun) and diseased meat (for the cattle plague had been raging all round the neighbourhood), and drinking the Nile water polluted by hundreds of carcases of beasts which had died of bovine typhus, whose skins were stored up in rotting heaps in the interior of the town.

Mansourah, the next town at which the disease appeared, lies on the right bank of the Nile in the angle formed by the junction of the Ashmûn Canal with the Damietta branch, and about 45 miles by river of that place; it has 27,000 inhabitants, of whom a large proportion are Europeans.

Until June 30th the epidemic made little progress, except at Damietta, where the deaths had reached 119 in the previous 24 hours, the mortality in Mansourah being 10 in the same period, and some three or four dropping cases appeared in Port Said; no doubt amongst fugitives who had escaped from Damietta across Lake Menzaleh. On the 30th, however, the disease broke out at Semeuond, a small town on the river, 15 miles from Mansourah; and on the 31st July it broke out at Chirbine, half way between Damietta and Mausourah in this case departing from its usual course of advance up the river. On the same date the daily mortality at Damietta reached its maximum (157), and from that time began slowly, but steadily, to decrease.

Matters remained stationary for some time at this period, as the cholera confined itself to the few towns already named; and their neighbouring villages, but the advent of Rhamadan on July 8th, with its alternate fasting and feasting, probably tended to aggravate the disease and give it more favourable matter to work upon. Accordingly, on the 10th July, the epidemic appeared at Chibin-el-Kom, an alarming jump as far as the capital was concerned; since then, for the first time, it left the Damietta branch, to which it had hitherto been confined, and established itself on another branch of the river at a distance of only 35 miles from Cairo. Almost immediately afterwards the epidemic appeared in various towns all over the delta, and on the night of the 14th five deaths were reported to have taken place at Ghizeh, a village only a mile from Cairo on the opposite bank of the Nile.

During the time that the epidemic had been spreading in the lower part of the delta, the Sanitary Officer to the British Army had been in constant communication with the Council of Health, and assisted them with his advice.

As early as the 25th June the military and medical authorities had considered the disposition of the Army in the event of an outbreak of cholera amongst our own troops; sites were chosen for camps, and others were selected in the vicinity of the various barracks on which tents could be pitched for the reception of men attacked by the disease, and medical equipment, and commissariat supplies were held in readiness to meet the requirements of hospitals and camps. Large quantities of disinfectants were in the country, and further supplies were telegraphed for; native labour was reduced to a minimum in barracks and hospitals, and those who were unavoidably retained were, as far as possible, prevented from communicating with their friends; a confidential memorandum was issued to commanding officers and medical officers, directing all possible sanitary precautions to be taken, and there remained nothing more to be done but to await the event.

Cholera having appeared, as before mentioned, in the immediate vicinity of Cairo, a cordon was drawn round the place, but without avail, for on the afternoon of the 15th July cases were reported in the low Arab quarter, called Boulâk situated on the city side of the river, about a mile further down stream than the orginally infected village of Ghizeh, and in dangerous proximity to the Kasr-el-Nil Barracks, then occupied by the "Black Watch," one wing of the King's Royal Rifles. a company of Royal Engineers, and details of the Commissariat and Ordnance Store Departments. All men of the Army of

Occupation were immediately prohibited from entering the Arab portions of the town, and camp accommodation was sent out to Helouan for 1,500 men, accompanied by hospital equipment, and a company from the "Black Watch," King's Royal Rifles, and Gordon Highlanders, for the purpose of pitching the tents. For the first few days, following the same rule as elsewhere, the epidemic smouldered; but on the 20th, as the deaths in Boulâk in the previous 24 hours numbered 108 out of a total of 146 in the whole city, it was deemed avisable to evacuate Kasr-el-Nil Barracks, and to move the troops there stationed to Suez, of which place the following report had been sent in by Lieut.-Col. Ardagh, C.B., on the 10th instant:—"The Indian Hospital at "Suez lies to the north of the town, and has desert on two sides fit for camp- "ing. To the south is a patch of ground rendered moist by the water from "the canal, but this can easily be remedied by digging out a channel and "confining the stream to it. The buildings are well raised from the ground "on cast-iron dwarf pillars 18 inches high, and have a free current of air "underneath, they have very wide verandahs and double roofs, and are all "built of timber, like the Aldershot huts, but very much better finished, "with louvres outside of the balconies. There are only two large wards, each "of about 30,000 cubic feet, with 57 other rooms, from 2,000 to 6,000 cubic "feet each, intended for officers' quarters, medical staff, female hospital, &c., "besides stores, kitchens, latrines, wash-houses, and stabling for about eight "horses.

"Half a battalion could be comfortably housed, and by pitching tents for "sleeping, and making the large wards and verandahs day rooms, a battalion "could be put up. I consider it cooler than Cairo; it is an easy place to guard, "and in remarkably good condition. At present the Indian Government occupy "about one-third of it, but have far more room than they need. The neigh- "bouring desert is clean, flat, and boundless; and along the Sweet Water Canal "there is, of course, an ample supply of water, which looks very good. Water "is laid on everywhere in the hospital, both hot and cold. There are fireplaces "in every room, many having cooking stoves, and water laid on."

On the same date as the evacuation of Kasr-el-Nil, the bakery for the troops was moved from Boulâk to the Abattoir, on the Abbassiyeh Road, and all flour was ordered to be ground at, and obtained from, Alexandria.

Up to now the disease had, to a great extent, confined itself to the Boulâk quarter; but an unfortunate step taken by the Préfét of Police, namely, the forcible ejection of large numbers of the inhabitants, and their consequent spreading in all directions over the more healthy portions of the town, no doubt contributed in a great extent to the rapid increase and spread of the epidemic.

This exodus was stopped as soon as possible by the Lieut.-General Commanding, in conjunction with Sir E. Malet, but a considerable number, no doubt, evaded the police, and helped to infect new spots throughout the city, as was exemplified in the Abdin quarter, where the deaths rose from six on the 20th to 30 on the 21st. It was accordingly decided to evacuate the barracks of the same name, which was done by sending the remaining half-battalion King's Royal Rifles to join the other wing at Suez, but in a separate camp, leaving only one company behind as guard over mess, and other property, and for duty in Cairo.

In the bulletin giving the deaths from 8 a.m. 22nd to 8 a.m. 23rd, 427 are found to have been registered in Cairo; of these 273 took place in Boulâk alone, the remainder in districts close to the river, only 20 occurring within a half-mile radius of the citadel and one at Abbassiyeh.

On the morning of the 22nd July the first case in the Army of Occupation was reported as having occurred and proved fatal in a soldier of the "Black Watch" at Suez, during the previous night. About 4.30 p.m. on the afternoon of the 23rd it was a matter of universal remark that a sudden atmospheric change took place at Cairo, the air became heavy, hot, and motionless, a thick yellow mist seemed to hang over the town, producing a languid and enervating sensation; it was also noticed by persons, who had an opportunity of judging, that all bird life had apparently ceased in the vicinity, feathered creatures having either departed or lapsed into a torpid condition, and the temperature, according to observations, was greater that evening, and the force of the wind less than for seven days before or for 15 days afterwards.

At 8 p.m. of the same evening (23rd), the first case of cholera appeared in the Cairo garrison, the victim being a man of the Royal Highlanders, belonging to a company of that regiment, left behind as store and quarter guard in Kasr-el-Nil Barracks. He had been employed as cook to the sergeants' mess, and for that reason had been in communication with natives rather more than his comrades. The same night (3 a.m. of 24th) two cases appeared amongst the detachment Army Hospital Corps, occupying quarters in the Harem Hospital, Abbassiyeh.

Almost simultaneously, in the Citadel Hospital, two men of the Cameron Highlanders, who had been under treatment several days for other ailments, were attacked in the centre division, together with a man of the Royal Highlanders, who had been ill with fever since 22nd June, and an officer of the Royal Artillery (Lieut. Le Quesne) under treatment in the officers' ward for enteric fever since 7th July. Three more cases occurred the same day in a barrack-room occupied by the Cameron Highlanders.

The two hospitals and some of the larger barracks having thus become tainted, it was at once decided to vacate the buildings. All patients, therefore, to the number of 102, who could possibly be moved, were despatched by evening train from Abbassiyeh to Helouan Camp, about 12 miles, to which place all details that could be spared from duty in Kasr-el-Nil Barracks were also sent. The Royal Sussex Regiment left Abbassiyeh the same evening (24th) by train for Ismailia; when the remaining 19 patients (serious cases) in the Harem Hospital were moved into one of the most airy barrack-rooms vacated by that regiment, and although eight cases of cholera subsequently occurred among the military police, and other details, necessarily left in the barracks for duty, the patients remained unassailed by the disease.

At the citadel the centre and right divisions of the hospital were immediately vacated the greater number of the more serious cases being moved into a building used as a Presbyterian church in the citadel, others into the left division which had not been occupied for some months and had recently been cleaned, whilst all patients suffering from venereal diseases and ailments of minor importance were sent into camp at Helouan. Amongst the sick thus distributed no case of cholera subsequently occurred in the church building, but on 28th July two cases having occurred in the left division of the old hospital, it became necessary to vacate it also and its occupants were moved nto the mess house, Cameron Highlanders, one of the most airy buildings in the citadel and well adapted to the purpose. Here, however, four more patients were attacked on 30th, when this building was in turn vacated and the patients treated in marquees pitched in an adjacent square, the hospital population being still further reduced by sending 35 to Helouan.

Early on the morning of the 25th the 19th Hussars, (three squadrons) G/B R.H.A., I/2 R.A., and the mounted infantry, moved from Abbassiyeh by train to El-Warden, a place situated on the edge of the Libyan desert about 30 miles N.W. of Cairo, close to the Rosetta branch of the Nile, and plentifully supplied with water by a canal; and the Cameron Highlanders were moved from the citadel up to Mokhattam Heights, a high plateau lying E.S.E. of Cairo and so situated that the prevailing wind swept right across it. For military reasons it was necessary to retain the Gordon Highlanders and 6/1 Scottish Division, R.A., in their quarters in the citadel, but everything was done to render their position as healthy as possible by placing men under canvas in the barrack squares, spreading them out in their rooms and by making use of the flat barrack roofs to sleep on. These measures were attended with favourable results. In the battery only three mild cases occurred, on 31st July and two following days, in the regiment there were 10 attacks, six of which were fatal, between 25th July and 1st August.

Unfortunately, in nearly every instance the movement of troops was followed by the outbreak of cholera in camp, a fact particularly marked in the case of the regiments sent to El-Warden and Ismailia, all of which had left their barracks at Abbassiyeh apparently before they were infected.

On the 2nd day, 27th–28th, after the arrival of the troops at the first-named place, ten attacks and six deaths occurred, quickly followed by others at Ismailia; cholera also showed itself on the afternoon of the 26th, and on the following day five more cases occurred. On 27th July the epidemic may be said to have established itself everywhere among the troops; no corps was now

free except 6/1 R.A., in the citadel, and no place remained untainted, for cases had appeared in the company of rifles necessarily detained at Abdin, in camp at Helouan, and at the main guard in Cairo, in consequence of which the latter place was at once closed. Consequent on this state of things further moves of the troops became necessary, and were carried out with the least possible delay. The Sussex Regiment at Ismailia was moved from the palace and its neighbourhood to a site along the Sweet Water Canal, and again on 1st August to the environs of the Empress Châlet, which is on high ground 2½ miles N. of the town, and close to the Suez Canal, after which it remained free from the disease.

The troops at El-Warden broke camp and re-pitched on a spot two miles south of their original site, but still close to the canal and railway. This move was also speedily attended with improvement in the health of the troops, and the cases which afterwards occurred were chiefly in the hospital among patients affected with suspicious diarrhœa or among hospital attendants.

On July 31st the first case occurred in the Cameron Highlanders, after their move to Mokattam Heights, in a tent on the extreme southern border, to leeward of the camp. The row in which it stood was moved, and only one other slight case appeared in the regiment. During the next few days little change took place in the progress of the epidemic, for although the number of attacks were fewer, the deaths remained very much the same in consequence of the majority of the earlier cases proving fatal.

On August 5th as cases were still appearing in the company King's Royal Rifles, which had been encamped on Abdin Square and detained in Cairo on military grounds, it was removed to the Mokattam Heights where they were encamped on a spur S.W. of and 290 feet higher than the camp of the Cameron Highlanders. No further case occurred in the detachment.

In consequence of the daily occurrence of cases of cholera amongst the sick at Helonan, which every practicable change of ground did not tend to prevent (25 cases occurred between 26th July and 5th August), it was decided to form a convalescent camp at Mokattam on a plateau S.E. of the other encampments; and after the great difficulty, in regard to water supply, had been overcome, it was occupied by the first party of 50 invalids on 8th August, followed by like numbers on the 10th, 12th, and 17th.

This move was attended with much benefit to the health of the patients, and only one mild case of cholera occurred in the new camp (on 13th) after it was carried out.

At Suez dropping attacks were occurring from time to time, and on July 27th the head-quarters, King's Royal Rifles, were moved further into the desert about a mile north of their first encampment. Three more cases, however, appearing on August 3rd–4th, they were moved another mile on the evening of the latter date.

The following day, as two fatal cases occurred amongst the Royal Highlanders, that regiment was moved to a position one mile north of the Indian Hospital, again shifting camp on the 7th. On the afternoon of the 12th August two attendants on the sick of this regiment were attacked and died. On the following morning the hospital was again removed a mile northwards, and on the 15th the regiment moved to a point three miles north of Shalouf (13 miles from Suez). On that and the following day two more cases occurred, when the regiment was finally moved to a site near the Great Bitter Lakes (about 6 miles from Geueffe) and the disease disappeared.

During the whole of this period from 4th August, the King's Royal Rifles had enjoyed an immunity from cholera, but their canteen sergeant was attacked on the 19th, and the next morning the camp moved to the Bitter Lakes, two miles south of that occupied by the Royal Highlanders. As another case appeared in their new camp, they were again moved to a spot two miles north of Geueffe, where they remained until they returned to Cairo on 11th September, having been preceded by the Royal Highlanders on the 4th, the cavalry, &c. from El-Warden on the 6th, and the Royal Sussex from Ismailia on the 7th of the same month. Sporadic cases of cholera had occurred among the civil population of Alexandria from the beginning of July, but there was no indication of its appearance at Ramleh until 3rd August, when a quartermaster-sergeant, who had come from his quarters in Alexandria on sick leave, was taken ill in a room occupied by a staff sergeant

of the Army Hospital Corps in the Palace Hospital. He was at once removed to a hut at some distance from the hospital, but died in 11½ hours. The room in which the case occurred was closed and disinfected, and other rooms near to it occupied by the Army Hospital Corps were vacated, but on the following day a corporal of the detachment was attacked and died.

At this time there were 236 sick in the hospital, and on the 5th one of these was attacked in a ward on the first floor. On the 7th, Mrs. Hynd, wife of Quartermaster Hynd, Army Hospital Corps, was attacked in the Officers' quarters, centre block, and on the 9th a second patient in a ward next to that in which the case occurred on the 5th. All of these were fatal.

On the 10th (Deputy Surgeon-General Fox reports) the hospital was vacated except the detached wards in the north face overlooking the sea, where there were 23 serious cases, chiefly of enteric fever, which could not well be moved into camp. On that day, however, another case, which eventually recovered, occurred on the 2nd floor of the hospital. On the 11th and 12th two of the patients removed from the hospital were attacked, and on the 15th one of those in the building suffering from enteric fever when these last were also placed under canvas.

On 16th and 17th two cases occurred in the marquees, which were then moved to higher ground to N.E. nearer the sea. On the 21st, a private of the Army Hospital Corps living on the ground floor of the palace (contrary to orders) was seized with cholera, after which there were three more cases in camp, 21st–23rd, when the disease finally disappeared. Of the total of 15 cases (including that of Mrs. Hynd), 8 occurred in the hospital and 7 in camp; 11 were fatal. The troops in barracks, consisting of the Duke of Cornwall's Light Infantry and a squadron of 19th Hussars, although within 150 yards' distance from the hospital, entirely escaped, nor did any case occur in the battery of artillery, half the West Kent Regiment, and detachments in Alexandria Garrison.

The history of the past epidemic is naturally divided into two portions, one having reference to its progress through the country, the other in so far as it affected the army of occupation. With the former, I have no sufficient data to deal further than to state that, by observing the dates of attack of the different towns, we find it followed, as a rule, one or other of the branches of the Nile, and that towns situated at a distance from the river were not attacked till very late, and escaped comparatively lightly.

It may be remarked that experience in Egypt, as in other places, does not tend to prove the utility of sanitary cordons, for it does not appear that they in any way delayed or checked the spread of the disease, and it is very probable that the cordons, by exciting fear amongst the natives, led them to fly from their homes on the first appearance of the disease and establish themselves in distant places where coercion of the kind did not exist.

As has always been the case, overcrowding and want of sanitation had the usual injurious effects, the death-rate of the various towns throughout the country varying directly in proportion to the extent to which these evil influences existed; for example, Damietta, the most filthy town in Egypt, lost, according to the returns, 2,072 out of 29,000 inhabitants, while Tantah lost only 579 out of 60,000. Shibin-el-Kum, a greatly overcrowded place, had 1,129 deaths in a population of 13,000, whereas Mehalet-el-Kebir had only 676 in a population of 60,000.

The apparent benefit derived during the epidemic from evacuating and burning the lower class of houses, and from the burning of large fires, either with or without sulphur or tar, was noticeable at Cairo. On July 23rd the deaths in the Boulâk quarter were 273; that night a considerable number of the inhabitants were taken down the river about 14 miles and encamped at the Barrage, and their former dwellings burnt; on the following day the mortality in the quarter had fallen to 121. In the Abdin quarter a number of houses were burnt on the 29th, and the following day the mortality fell from 43 to 25. In both instances the decrease of mortality was greatly out of proportion to the number of people removed.

The most important point of all is the consideration of the epidemic with special reference to its effects upon our own soldiers, and its first striking feature is the extreme virulence in the type of the disease. On reference to the returns, we find that of a total of 200 attacked, only 54 or 26 per cent. were saved. Again, every fatal case was of the very worst type, and death

generally took place within 24 hours, very few lasting to the secondary fever, or even tepid stage.

Table of duration of fatal cases:—

Places.	Under 6 Hours.	Under 12 Hours.	Under 24 Hours.	Under 2 Days.
Citadel	—	7	5	3
Abbassiyeh	1	1	4	1
Cairo	1	3	4	—
Helouan	1	10	6	5
El-Warden	5	9	6	3
Ismailia	4	5	6	4
Suez	5	7	5	1
Alexandria	2	3	4	1
Total	19	45	40	18

Attacks were ushered in, as a rule, by one or two violent fits of vomiting and purging, quickly followed by collapse; suppression of urine was, of course, constant, but cramps were not always present, though in some instances they appeared, shifting suddenly from one extremity to the other in a most distressing manner.

Beyond the general fatality it was not noticed that any unusual or special symptom was present in this epidemic, nor was any particularly new line of treatment followed. Nitrite of amyl was tried in a good number of cases, but was not found to be of any use, its effect on the circulation being merely momentary reaction, leaving the patient in an almost worse state than before the exhibition of the drug. Large hypodermic injections of chloral were found very useful in alleviating the distress caused by the "flying cramp" before referred to, and the neutral salt of quinine was found to be beneficial when used in the same manner. Calomel and pilocarpine were tried in some cases, but the medical officers using them do not report favorably of the result. Transfusion of the following solution into the median basilic vein was performed in two cases by Surgeons Parke and Davies at Helouan, but both cases, were in too advanced a stage of collapse for any good result.

Sodium chloride 6 grammes.
Sodium carbonate 1 gramme.
Water to 1,000 grammes.

It has been maintained that persons in attendance on cholera patients are not more liable to contract the disease than those living otherwise under similar conditions.

The experience of the past epidemic, however, does not bear out this assertion, as the men of the Army Hospital Corps suffered out of all proportion to the other branches of the service.

At the time of the outbreak the strength of non-commissioned officers and men employed in the various hospital duties in the Cairo district was 102, and of these 16 were subsequently attacked with cholera, and 13 died. Probably not more than 45 were in personal attendance on cholera patients, but nearly all of those attacked had been in close contact with them.

From the returns it further appears that during the epidemic 80 regimental orderlies were employed as supplementary attendants on the sick generally, and of that number 17 were attacked with cholera and eight died, again showing a large disproportion as compared with men performing the ordinary duties of a soldier.

As regards the greater liability of the sick to contract cholera we find that in a total of 200 cases 51 were patients in hospital under treatment for various complaints, and 37 died. This shows that although a large number of patients were attacked their death-rate in proportion to attacks was not greater than that amongst healthy men; and it was not found that those suffering from any particular class of diseases had a greater tendency to contract cholera than other sick. Another point which claims attention is the influence which previous habits, age, and length of service, exercise as regards the liability to and fatality of cholera in the different arms, *vide* Appendix A., which shows that the mortality was not greater in proportion to attacks amongst men of intemperate or irregular habits than among the temperate; that it was greater amongst the older soldiers than amongst the younger; that the Artillery suffered more severely than the Cavalry and Infantry, whilst the Royal Engineers, Commissariat, and Ordnance Corps had but one fatal case each, the large number under departmental corps being, with three exceptions, in the Army Hospital Corps. There is no doubt that the troops moving into camp carried the disease with them, and it manifested itself after their arrival, as is common enough in India; but the attacks in most instances lasted but a short time in the separate bodies, as was particularly the case at Mokhattam, at El-Warden, and Ismailia. I believe an idea has prevailed among certain persons to the effect that the movement of our troops into cholera camps did not take place until too late, and that, had they been encamped in the desert before Cairo itself was attacked, no evil results would have followed. As regards this it must be borne in mind that turning troops out of comfortable quarters, more particularly the sick who, as is frequently the case, were the first to suffer, and exposing them to the discomforts of camp life at the hottest time of the year is not a step to be taken except under dire necessity, and is never resorted to in India until such necessity arises. In a country, too, like Egypt, where we are tied down on account of railway transport and water supply to very few sites, and these none of the best, the movement of troops is attended with much greater difficulties than in India, where trained native labourers are attached to every corps, and save the men from the fatigue which here necessarily falls upon them owing to the want of all such assistance. During the past epidemic the fatigue from which the men suffered in moving camps, was excessive, particularly in the hot desert sand, and must, undoubtedly, be regarded as a chief exciting cause of the sudden and severe outbursts of cholera by which some of the moves were immediately followed. Another powerful argument against the premature evacuation of barracks is the total escape of some regiments and corps from infection, and the comparative immunity of others which, for military reasons were obliged to remain in occupation of their quarters. In the first category come all the troops at Alexandria and Ramleh, where, although the sick in the immediate vicinity of the latter were severely attacked, the Duke of Cornwall's Regiment, a squadron of the 19th Hussars, a wing of the West Kent Regiment, and a battery of Artillery, besides the usual details of other departments, escaped without a case amongst them in barracks; in the second come the 6/1 Scottish Division, Royal Artillery, in the citadel at Cairo, of whom only three were lightly attacked, and none died, and the Gordon Highlanders at the same place, who lost only six of their number out of 10 cases.

Finally, when we consider the severity of the epidemic, we have every reason to congratulate ourselves on the comparatively small number of attacks in the whole force of 6,500, amounting to 200, or about 3 per cent., and if we deduct patients and hospital attendants we find that 115 or 1·8 per cent. suffered from the disease, a result in either case which will contrast favourably with that of many epidemics of cholera among our soldiers in India.

APPENDIX A.

Branches of the Service.	Temperate.		Intemperate.		Irregular Habits.		Age.										Service.												Total.		Strength.	Percentage.	
							20 to 25.		25 to 30.		30 to 35.		Over 35.		Total.		Under 3 years.		3 to 6 years.		6 to 9 years.		9 to 12 years.		Over 12 years.		Total.						
	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.		Attacks.	Deaths.
Cavalry - -	13	7	1	1	—	—	8	4	5	3	1	1	—	—	14	8	7	4	3	2	3	1	1	1	—	—	14	8	14	8	502	2·8	1·6
Artillery - - -	26	16	—	—	—	—	5	3	11	6	7	4	3	3	26	16	3	1	6	3	10	7	2	1	5	4	26	16	26	16	593	4·4	2·7
Engineers - -	2	—	1	1	—	—	2	—	—	—	—	—	1	1	3	1	—	—	2	—	—	—	—	—	1	1	3	1	3	1	223	1·3	·4
Infantry - - -	104	81	24	18	1	1	78	61	34	24	9	8	8	7	129	100	45	32	48	43	4	4	16	8	16	13	129	100	129	100	4,853	2·7	2·1
Departmental Corps -	18	15	1	—	3	2	10	8	7	4	5	5	—	—	22	17	4	4	11	8	2	1	4	3	1	1	22	17	22	17	479	4·6	3·5
Total - -	163	119	27	20	4	3	103	76	57	37	22	18	12	11	194	142	59	41	70	56	19	13	23	13	23	19	194	142	194	142	6,650	2·9	2·1

TEMPERATURE CHART FOR JUNE 1883.

Meteorologique au Laboratoire Khedivial, Cairo.

Date.	Barometer, Mean.	Temperature, Fahrenheit.							Humidity, Mean.	Evaporation, Mean.	Rain.	Wind.				Ozone.	Remarks.
		Minima.			Maxima.												
		Morn.	Noon.	Even.	Morn.	Noon.	Even.	Mean.				Morn.	Noon.	Even.	Force.	Mean.	
1	759·89	59°	69·2	83·2	84·2	94°	97·1	80·49	73·66	5·43	—	N.E.	N.E.	N.E.	16·091	7	
2	755·61	59°	80·8	84·9	86°	95°	96·8	83·75	44·66	4·76	—	N.E.	E.N.E.	N.E.	11·662	8	
3	757·39	60·8	60·8	82·9	87·8	93·2	96·5	80·16	44°	3·50	—	N.E.	E.	N.E.	6·073	4	
4	754·93	62·6	73·4	72·1	86°	100·4	100·4	82·48	37·66	4·10	—	N.W.	W.N.W.	N.	5·813	9	
5	754·89	62·6	66·2	76°	86°	87·8	88·6	77·86	44·66	4·13	—	N.E.	N.W.	N.	14·058	6	
6	755·66	61·5	64·4	79°	79·3	86°	90·4	76·73	49°	3·16	—	E.N.E.	E.N.E.	N.	8·451	4	
7	753·88	59·8	66·2	83·2	82·4	91·4	94°	79·5	36·33	3·33	—	N.E.	E.	E.N.E.	11·312	4	
8	755·76	63·1	69·8	86°	93·2	102·2	102·2	86·08	30·66	4·03	—	N.E.	E.	E.	14·469	5	
9	753·87	64·9	68°	84·2	89·6	95°	101·2	83·81	44·66	3·60	—	N.N.E.	NE.	N.E.	8·224	3	
10	754·16	62·9	66·2	79·6	86°	87·8	91·4	78·98	46·66	3·53	—	N.E.	N.	N.N.E.	16·139	4	
11	754·86	63·1	66·2	66·2	84·2	88·3	92·8	76·8	49·66	3·50	—	N.E.	N.	N.	9·917	3	
12	756·70	67·2	68°	68°	83·2	89·6	92·2	77·7	43·3	3·00	—	N.N.W.	N.W.	N.	6·264	5	
13	756·42	64·4	68°	85·1	84·2	89·6	93·2	80·41	46°	3·50	—	N.N.E.	N.	N.E.	2·895	3	
14	754·24	64·4	68·9	86°	87·8	93·2	96·8	82·85	52·3	3·70	—	E.N.E.	E.E.N.	N.W.	8·323	4	
15	752·88	63·5	68°	86°	89·6	94·1	96·8	83°	46·3	4·13	—	N.	N.E.	N.	7·541	4	
16	753·77	64·9	70·9	86°	87·8	93·2	96·8	83·2	46°	3·43	—	N.E.	N.	N.	8·071	3	
17	754·03	63·1	66·7	87·8	89·6	96·2	96·8	82·86	51·66	3·20	—	E.N.E.	N.	N.E.	6·272	3	
18	755·07	66·2	71·6	68·9	89·6	93·2	96·8	81·05	53°	2·86	—	N.E.	N.	N.	9·511	3	
19	754·67	66·2	66·2	86°	89·6	91·9	99·9	82·63	58°	3·73	—	E.N.E.	N.E.	N.E.	13·888	3	
20	755·61	64·4	68°	87·8	89·6	93·2	97·3	83·36	44·66	2·66	—	N.E.	N.N.E.	N.E.	13·269	2	
21	755·87	68°	68°	86°	96·8	96·6	99·4	86·13	33·66	4·00	—	E.N.E.	N.	N.N.E.	10·400	3	
22	756·29	64·4	69·8	84·2	90·1	95°	95°	81·91	41°	3·13	—	N.E.	N.E.	N.	8·062	3	
23	755·08	64·4	68°	91·4	87·8	96·8	100·6	84·83	40·33	3·50	—	N.E.	N.	N.E.	6·031	4	
24	755·23	69·8	73·4	80·6	95°	96·6	99·5	86·15	40·66	2·70	—	N.E.	N.W.	N.	9·980	2	
25	757·76	63·1	62·6	68·9	84·2	86·5	89·6	79·81	48·33	3·40	—	N.N.E.	W.	N.	9·140	1	
26	757·16	61·3	66·2	77°	82·4	86°	88·7	77·86	44·33	2·70	—	N.E.	N.	N.E.	10·177	2	
27	755·99	63·1	68·2	77°	82·4	87·8	88·7	77·86	58·66	3·23	—	N.N.W.	N.W.	N.	11·302	1	
28	755·31	62·3	68·2	79·7	80·6	87·8	90·5	78·23	44·66	1·76	—	W.N.W.	N.	N.	9·443	4	
29	755·75	59·5	66·7	80·8	84·2	89·6	91·4	78·7	42°	2·46	—	N.W.	N.E.	N.	6·039	3	
30	756·00	61·3	68·2	82·4	91·4	89·6	95·9	81·46	53·66	2·13	—	—	—	—	11·087	5	

TEMPERATURE CHART FOR JULY 1883.

METEOROLOGIQUE AU LABORATOIRE KHEDIVIAL, CAIRO.

Date.	Barometer, Mean.	Temperature, Fahrenheit.							Humidity, Mean.	Evaporation, Mean.	Rain.	Wind.				Ozone.	Remarks.
		Minima.			Maxima.												
		Morn.	Noon.	Even.	Morn.	Noon.	Even.	Mean.				Morn.	Noon.	Even.	Force.	Mean.	
1	756·29	63·1	68·2	78·8	86·0	87·8	89·6	78·91	49·66	3·36	—	N.E.	N.	N.	11·839	4	
2	755·87	62·6	68·2	79·7	84·2	87·8	90·5	78·83	44·33	2·63	—	N.E.	N.	N.	11·694	5	
3	755·93	63·1	68·2	78·8	84·7	86·0	89·6	78·4	50·66	2·69	—	N.E.	N.W.	N.	9·888	5	
4	756·28	62·6	66·2	79·0	84·2	86·5	89·6	78·01	46·33	4·20	—	N.E.	N.	N.E.	12·884	8	
5	755·78	63·1	68·0	77·9	82·4	87·8	90·5	78·28	48·00	4·20	—	N.E.	N.	N.	10·205	3	
6	755·48	64·4	68·2	79·0	82·4	89·6	91·4	79·11	49·33	3·73	—	N.E.	N.	N.	10·863	5	
7	755·50	63·1	68·2	80·4	84·2	89·6	93·	79·75	47·33	2·96	—	N.W.	N.N.W.	N.	8·195	4	
8	755·53	64·4	64·4	83·3	85·1	91·4	94·1	80·45	39·66	2·63	—	N.W.	N.	N.	8·465	6	
9	754·64	64·4	69·8	86·	81·8	93·2	96·5	82·95	40·3	3·20	—	N.W.	N.	N.	6·196	6	
10	757·01	64·4	64·4	85·05	91·4	94·1	96·6	82·49	39·33	3·06	—	N.E.	N.	N.	7·176	3	
11	754·28	64·4	68·	84·7	89·6	93·7	96·8	82·86	45·33	2·86	—	N.E.	N.E.	N.	8·954	4	
12	755·76	67·1	67·5	84·6	89·6	93·7	96·8	83·21	47·00	3·06	—	N.E.	N.	N.	9·820	5	
13	753·77	66·2	69·8	87·8	89·6	96·3	98·2	84·65	44·33	3·20	—	N.E.	N.	N.	8·454	5	
14	753·34	66·2	68·9	89·8	92·3	99·1	100·4	86·11	42·00	2·80	—	N.E.	N.	N.	7·063	6	
15	753·20	66·2	68·2	87·8	93·7	96·8	99·5	85·36	48·33	2·76	—	N.E.	N.	N.	7·847	7	
16	752·84	68·	68·9	87·8	93·2	95·	97·7	85·1	46·00	2·26	—	N.E.	N.	N.	6·569	4	
17	751·03	68·9	72·3	86·9	91·4	92·9	96·6	85·16	46·66	2·43	—	N.E.	N.	N.	6·786	5	
18	752·03	70·	71·8	86·	95·	96·8	100·	86·6	47·66	2·43	—	N.N.W.	N.W.	N.	6·177	4	
19	755·08	65·3	62·6	82·4	89·6	90·5	94·2	80·76	45·33	2·73	—	N.E.	N.	N.	10·562	5	
20	755·76	63·1	66·2	80·8	86·	87·8	93·2	79·51	42·66	2·56	—	N.E.	N.	N.	9·073	4	
21	754·50	64·6	61·	79·7	87·8	86·8	91·4	78·51	50·66	1·73	—	N.E.	N.E.	N.	12·874	4	
22	753·96	66·2	67·4	84·4	73·4	92·3	95·	79·78	46·33	2·93	—	N.	N.E.	N.	7·010	3	
23	753·55	66·3	66·7	89·8	88·3	96·5	100·9	84·50	43·	3·70	—	N.E.	N.W.	N.E.	4·069	4	
24	753·37	66·7	76·	89·9	93·7	98·6	100·4	87·55	43·	3·90	—	N.	N.E.	N.	6·050	6	
25	753·19	66·2	74·1	88·5	95·2	97·	99·1	86·68	36·66	4·13	—	N.E.	N.E.	N.	9·127	6	
26	755·78	68·2	71·8	88·	93·7	96·5	98·6	85·96	40·66	4·10	—	N.E.	N.E.	N.	6·237	6	
27	751·89	68·4	73·5	89·8	92·5	96·8	100·9	86·98	43·33	2·50	—	N.E.	N.E.	N.	8·058	6	
28	752·83	70·0	74·1	88·	95·0	95·7	102·2	87·5	43·33	2·00	—	N.E.	N.E.	N.	7·877	6	
29	754·97	68·2	74·1	88·9	91·9	95·0	100·4	86·41	42·	2·16	—	N.E.	N.E.	N.	8·646	6	
30	754·09	66·4	73·6	88·2	97·3	97·4	99·2	87·01	44·66	2·96	—	N.E.	N.	N.	9·797	4	
31	753·53	66·2	68·2	86·2	97·2	98·6	98·6	85·83	45·	2·30	—	N.E.	N.	N.	5·227	4	

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TEMPERATURE CHART FOR AUGUST 1883.

Meteorologique au Laboratoire Khedivial, Cairo.

Date.	Barometer, Mean.	Temperature, Fahrenheit.							Humidity, Mean.	Evaporation, Mean.	Rain.	Wind.				Ozone.	Remarks.
		Minima.			Maxima.												
		Morn.	Noon.	Even.	Morn.	Noon.	Even.	Mean.				Morn.	Noon.	Even.	Force.	Mean.	
1	752·76	68·2	68·2	89·8	91·4	95·	99·1	85·28	47·66	2·00	—	N.E.	N.E.	N.	6·231	4	
2	753·82	68·2	80·8	89·6	93·2	96·6	99·1	88·25	38·66	4·26	—	N.E.	N.E.	N.E.	6·173	6	
3	752·34	68·2	84·6	89·8	89·6	96·6	102·7	88·91	41·66	2·90	—	N.	N.	N.	4·761	4	
4	753·29	68·7	80·8	81·8	89·6	95·5	96·6	86·83	44·33	2·80	—	N.E.	N.E.	N.	9·953	3	
5	753·79	68·2	72·3	86·	89·6	93·2	96·8	84·68	53·66	3·73	—	N.E.	N.E.	N.	11·418	6	
6	754·77	68·2	73·6	86·2	91·9	93·2	95·0	84·68	58·33	3·16	—	N.E.	N.E.	N.	10·317	8	
7	752·80	66·7	77·0	77·0	90·1	93·2	95·9	83·31	54·33	4·70	—	N.	N.	N.E.	6·813	7	
8	753·30	68·2	75·0	79·7	84·9	89·6	91·4	81·46	52·00	2·86	—	N.	N.	N.	17·474	4	
9	753·36	68·2	73·6	70·8	89·6	89·6	90·6	80·4	54·66	3·46	—	N.E.	N.E.	N.	11·345	5	
10	753·32	68·0	70·4	82·4	84·7	89·6	91·4	81·08	52·00	3·86	—	N.	N.	N.N.E.	9·558	7	
11	753·72	66·2	84·2	84·2	87·8	89·6	94·1	84·35	50·00	3·80	—	N.E.	N.E.	N.	8·341	6	
12	754·74	69·8	79·7	82·4	91·4	95·0	95·9	85·7	46·66	4·40	—	N.E.	N.E.	N.	10·286	8	
13	753·18	67·1	77·9	83·3	86·9	95·9	97·7	84·8	47·33	4·23	—	N.E.	N.	N.N.E.	7·670	6	
14	752·24	68·9	71·6	84·2	88·7	95·0	98·6	84·5	53·33	3·36	—	N.W.	N.W.	N.	8·184	4	
15	752·13	68·9	75·2	83·3	89·6	91·4	96·8	84·2	51·33	2·73	—	N.	N.W.	N.	4·793	4	
16	753·67	67·1	69·8	80·6	89·6	93·2	94·1	82·4	53·00	2·80	—	N.E.	N.E.	N.E.	4·694	4	
17	753·36	66·2	71·6	83·3	88·7	89·6	92·3	81·95	57·66	3·60	—	N.E.	N.E.	N.	9·336	6	
18	755·47	65·3	68·0	80·6	88·7	89·6	94·1	81·05	51·00	3·53	—	N.E.	E.N.E.	N.	8·402	6	
19	756·20	64·4	68·0	79·3	86·5	88·1	91·4	79·61	51·66	3·50	—	N.E.	E.N.E.	N.E.	10·016	4	
20	756·47	64·4	68·0	82·6	87·8	90·5	93·7	81·16	53·33	3·13	—	N.	N.E.	N.E.	7·490	5	
21	755·34	68·9	73·4	83·3	87·8	102·7	104·0	87·51	34·00	4·00	—	N.E.	N.W.	N.W.	5·020	4	
22	756·39	68·5	73·4	73·4	93·2	89·6	91·4	81·58	53·33	3·90	—	E.	N.	N.E.	8·506	6	
23	755·37	64·4	77·0	77·0	84·7	87·8	91·4	80·38	49·66	3·13	—	N.E.	N.E.	N.	6·396	4	
24	755·65	66·2	68·5	78·8	86·5	87·9	89·6	79·58	49·66	3·60	—	N.E.	N.E.	N.	8·006	5	
25	755·71	64·9	71·6	77·0	84·7	86·5	89·6	79·05	53·66	3·20	—	N.	N.	E.N.E.	9·874	6	
26	755·86	64·9	73·9	78·8	82·9	87·8	90·3	79·76	46·66	3·60	—	N.	N.	N.	5·400	5	
27	755·65	64·4	70·3	78·8	84·2	87·8	89·8	79·21	51·33	3·30	—	N.	N.E.	N.	6·881	3	
28	755·12	64·4	70·3	77·5	84·7	87·8	91·4	79·35	53·33	3·60	—	N.E.	N.E.	N.E.	11·355	6	
29	755·43	64·4	73·4	79·3	84·7	89·6	91·5	80·46	56·00	4·00	—	N.E.	N.	N.	11·887	5	
30	755·49	66·2	68·0	79·2	86·0	90·0	92·0	80·26	52·66	3·61	—	N.N.E.	N.E.	N.E.	11·589	8	
31	753·28	64·4	66·9	77·7	84·7	88·1	92·0	79·96	55·00	3·46	—	N.E.	E.	N.	8·980	4	

TEMPERATURE CHART FOR SEPTEMBER 1883.

METEOROLOGIQUE AU LABORATOIRE KHEDIVIAL, CAIRO.

Date.	Barometer, Mean.	Temperature, Fahrenheit.							Humidity, Mean.	Evaporation, Mean.	Rain.	Wind.				Ozone.	Remarks.
		Minima.			Maxima.												
		Morn.	Noon.	Even.	Morn.	Noon.	Even.	Mean.				Morn.	Noon.	Even.	Force.	Mean.	
1	753·45	64·9	86·2	81·3	84·9	89·8	93·7	83·46	47·00	3·33	—	N.	N.	N.	7·681	5	
2	754·21	64·4	70·0	81·3	88·0	91·4	93·6	81·45	47·00	3·33	—	N.E.	N.E.	E.N.E.	7·208	9	
3	754·40	64·9	68·5	81·1	87·8	89·6	92·0	80·65	55·00	3·13	—	N.E.	N.E.	N.	8·365	9	
4	752·97	66·2	66·7	79·3	84·2	88·3	91·9	79·43	56·66	2·46	—	N.	N.	N.	5·976	5	
5	751·77	68·2	70·6	82·4	87·8	91·4	95·1	83·48	51·00	2·00	—	N.	N.	N.	4·052	5	
6	751·03	68·0	75·2	78·8	88·3	93·2	93·7	81·86	52·66	2·50	—	N.E.	N.	N.	3·640	5	
7	752·90	66·7	68·2	84·4	87·8	91·4	95·2	82·28	53·00	2·00	—	E.	E.N.E.	N.	3·322	6	
8	754·21	64·4	71·8	79·2	91·4	89·6	91·9	81·38	58·33	3·86	—	E.	N.E.	N.E.	6·159	4	
9	756·03	64·4	71·8	80·6	86·0	87·8	89·6	80·03	64·33	2·93	—	E.	N.E.	N.	9·574	6	
10	755·24	64·4	64·9	75·7	82·9	84·7	86·0	76·43	56·66	3·20	—	E.	N.E.	N.	11·088	5	
11	756·30	62·6	68·2	73·4	82·4	82·4	84·0	75·83	55·00	3·33	—	N.E.	N.E.	N.E.	12·274	4	
12	756·22	62·6	71·6	73·6	81·1	82·9	84·8	76·1	57·33	3·13	—	E.	N.E.	N.E.	10·414	4	
13	756·71	60·8	68·0	80·6	80·1	89·3	90·4	78·2	52·66	3·00	—	E.	N.E.	N.E.	10·274	4	
14	757·60	64·4	75·2	73·9	82·4	82·8	84·3	78·83	55·66	2·86	—	E.	N.N.E.	N.	7·518	4	
15	757·07	61·3	70·3	77·7	80·6	84·2	86·2	76·71	57·33	3·16	—	N.E.	N.E.	N.E.	10·772	4	
16	756·71	60·8	68·0	80·6	81·1	88·3	90·4	78·2	64·00	3·03	—	E.	N.E.	N.E.	10·499	7	
17	756·25	69·8	82·4	80·6	84·7	89·6	91·4	83·08	53·00	2·96	—	N.E.	N.E.	N.E.	10·078	4	
18	756·60	69·8	82·4	75·8	84·7	86·0	86·4	80·85	62·66	3·43	—	N.E.	N.E.	N.N.E.	7·405	8	
19	757·38	64·4	69·8	75·7	82·4	84·7	88·1	77·51	65·00	2·73	—	N.E.	N.E.	N.	9·433	5	
20	758·37	63·1	69·8	77·5	84·2	86·5	88·1	78·2	66·00	2·36	—	E.	N.E.	N.	9·120	8	
21	757·47	60·8	68·2	75·4	82·9	91·9	91·4	78·43	53·33	3·96	—	E.	N.N.E.	N.E.	9·930	2	
22	756·56	78·8	73·4	82·9	86·0	96·8	97·3	85·86	52·00	5·40	—	N.	N.E.	N.E.	6·458	3	
23	756·75	78·8	77·0	77·3	89·6	93·7	93·4	84·96	51·66	4·36	—	E.	N.E.	N.E.	12·554	2	
24	757·22	71·8	75·4	77·2	82·4	89·6	93·2	81·60	60·00	3·30	—	E.	N.E.	N.E.	15·931	4	
25	757·08	77·0	63·1	71·6	80·6	84·7	86·0	77·16	54·00	3·90	—	E.	N.	N.	6·227	5	
26	757·09	66·4	84·4	75·2	80·6	86·5	89·7	80·46	52·00	2·70	—	N.	N.	N.E.	2·391	4	
27	756·08	65·1	78·8	83·0	82·4	96·8	98·6	84·11	24·66	4·30	—	N.E.	E.	N.E.	6·039	2	
28	755·90	69·8	79·6	84·5	89·6	100·7	102·8	87·83	33·66	4·90	—	N.E.	S.	S.	12·300	2	
29	756·66	69·8	78·8	77·6	91·4	91·9	91·4	85·45	44·00	3·33	—	E.	N.W.	N.W.	3·916	3	
30	759·37	66·2	71·8	77·0	86·0	84·2	84·7	78·31	62·00	2·60	—	E.	N.	N.	5·972	3	

APPENDIX No. IV.

REPORT ON CHOLERA AT RAMLEH.

By Deputy Surgeon-General T. W. Fox, M.B.

THE outbreak of cholera at Ramleh Palace commenced on the 3rd August 1883. Quartermaster-Sergeant M———, M.S. clerk, aged 34, was suddenly taken ill in Staff Sergeant Gilder's room, No. 24, Army Hospital Corps barracks, in N.W. block of Ramleh Palace, and removed to No. 4 ward in cross corridor of first floor in the station hospital, Western Palace, where he was at once seen by a medical officer, and transferred, within half-an-hour from his admission, to the cholera huts at some distance from the hospital. He came, on 28th July, from quarters in Caracol Attarin, in Alexandria, but had not reported himself. He had been in weak health for some time, but had bathed in the sea close by that morning, just before he was taken ill. He died in 11½ hours.

The rooms occupied by the Army Hospital Corps near No. 24 were vacated; the room itself closed and disinfected.

4th August. Corporal J. M—, Army Hospital Corps, aged 21, was attacked in No. 55, ground floor, in the north face of the same building at some distance. He had scarcely seen the first case, but, it since appears, had been in great fear of cholera, and had taken more stimulant than usual. He died in 14 hours.

The rooms in this part of the palace were vacated at once, and the men removed to large rooms on the first floor in another part of the building, facing the north and close to the sea.

5th August. Private D——, 24, Duke of Cornwall's Light Infantry, in 27 ward, 1st floor, station hospital, was attacked, and died (in the cholera huts) in 28 hours. He was a patient in hospital since 1st August for debility. His room was closed and fumigated without delay.

7th August. Mrs. H——, wife of Quartermaster H—— in 26 room, officers' quarters, in Central Palace (western wing), was attacked, and died in 23 hours. She had been for some time in indifferent health. Her family and Mr. O'Connor's were at once removed to the best quarters available in the building. There was no accommodation to be obtained outside, and the rooms on third floor were distant, very large, airy, facing the sea.

9th August. Private W. F—, 20, Duke of Cornwall's Light Infantry, a patient in 28 ward, first floor, next door to last ward attacked, was admitted 2nd August—diarrhœa. Died of cholera in 15 hours.

On the occasion of this second case in the hospital (Western Palace), all that floor of the hospital, except wards shut off to windward and facing the sea, were vacated, and on 10th August the hospital was vacated, except the detached wards in north face exposed to north wind prevailing here nearly always at this season, and close to the sea, where were 23 serious cases, chiefly enteric fever, which could not easily be moved. Sixty-five were discharged as convalescents to convalescent camp, and 159 patients were transferred—48 to huts to N.E. of the palace and 111 to hospital marquees to north of the hospital, on open ground to windward, exposed to north wind and close to the sea.

On the same day another case occurred in eastern cross corridor, second floor, of the hospital. Private W. M——, age 28, Gordon Highlanders, sent from Cairo, 9th June, for debility, for change of air. He recovered.

11th August. Private A. V——, 25, Duke of Cornwall's Light Infantry, admitted 9th July for diarrhœa, was attacked in No. 5 marquee, in hospital camp, in front and to north of the buildings.

He had left 25 ward, near central corridor of the hospital, on the 10th inst He died in 76 hours.

12th August. Private W. T——, 20, Royal West Kent, was attacked in "F" hut. He came on 10th instant from 42 ward, second floor; was admitted 12th July—diarrhœa. He died in 12 hours.

15th August. Lance-Corporal F. P——, 23, Duke of Cornwall's Light Infantry, in 18 ward, first floor, north face (who came on the 10th instant from No. 3 ward, centre corridor), was attacked. He recovered. He was admitted 31st July, debility, and 11th August enteric fever.

The fever wards in the "north face" were now vacated and the patients placed under canvas.

16th August. Gunner F. B—, 33, Royal Artillery, admitted on 25th June, with dysentery, was seized with cholera in 3 marquee, and died in 6½ hours. He came from 40 ward, second floor, on 10th instant.

17th August. Private R. W———, 26, 19th Hussars, from 15 tent, from 3 ward, central corridor, on the 10th instant; died in two hours. A very delicate man. Admitted 31st July with S. C. fever.

The marquees on the lower ground, near the north face of the palace, were now moved to higher ground, more to N.E. and nearer to the sea, by directions from Surgeon-General Irvine, who inspected the hospital, &c.

19th August. Private J—— F——, 24, Army Hospital Corps, living in No. 3, ground floor, Central Palace (contrary to orders), was attacked, but recovered.

The marquees were again moved to higher ground, in very open order.

21st August. Gunner P. T——, 27, Royal Artillery, seized in No. 5 marquee, which was moved to higher ground on the 18th. He came from 44 ward, second floor of hospital, on the 10th August. Was admitted for dysentery on 5th July. He died in 13 hours.

23rd August. Two cases occurred in marquees on high ground, in the best position, close to the sea. One died in 11, the other in 7, hours, viz.:—

Private J. H—, Duke of Cornwall's Light Infantry, age 23. Admitted 31st July with enteric fever. Transferred from No. 3 ward, centre corridor, on the 10th, from 18 ward, north face, on the 15th instant.

Private J. H———, Duke of Cornwall's Light Infantry, age 21, admitted on 9th August with ulcer, and shortly after diarrhœa. Came from upper south corridor of hospital on the 10th.

On this date, the 23rd August, the epidemic at Ramleh ceased, and there have been no cases among the troops in barracks at Ramleh or in Alexandria, where the disease has been, since beginning of July, prevalent among the civil population, and has not yet quite disappeared.

The total number of cases here was 15, one officer's wife and 14 non-commissioned officers and men, of whom three were in indifferent health, and 11 were sick in hospital, 2 with enteric fever, 1 simple continual fever, 4 diarrhœa, 2 dysentery, and 2 for debility; out of 247 patients in hospital when the palace was vacated, many of these men were greatly debilitated by climate and disease, and the chief feature of the disease appeared to be great prostration of the vital powers with early collapse.

The average duration of the cases from attack to death was 17 hours, of which 9 cases lasted only 10 hours on an average; the shortest fatal case terminating in 2 hours, the longest lasted 76 hours; only three cases recovered, one from the central corridor, a convalescent from Cairo for debility, one, an enteric patient, from "North Face," one, a servant, from Central Palace.

Seven cases occurred in camp. These were 1, 2, 6, 7, 8, 11, 13 days respectively, out of the buildings, until the occurrence of the second case in the station hospital, the main building or "western palace." It appeared, taking into consideration the actual circumstances, undesirable to move the patients from the buildings for these reasons: the impossibility of escape from the cholera area, the epidemic being at the time all round us; the exceptional position of the station hospital, a large palace with airy and elevated wards, close to the sea, facing north, and fully exposed to the north wind constantly prevailing at this season; also the nature of many of the cases, especially of men debilitated by climate and enteric and dysenteric disease, and hardly fit to move under canvas at this season, if it could be avoided. In addition, the great difficulty of finding suitable and convenient ground for a hospital camp in the vicinity of Alexandria, almost surrounded by the sea and by shallow malarious lakes. The high ground at Water Tower Hill had

proved very unhealthy last year, the troops encamped there having suffered much from enteric fever.

The only other available ground was close to Ramleh Palace and Hospital, partly an old camping ground, partly a quarry covered with sand heaps between the buildings and the sea. This was the best ground for the purpose, and was occupied on the 10th August, but the disease continued for 13 days afterwards.

Looking back at the outbreak of the epidemic here, it would seem possible that the disease was introduced by Sergeant M———, the first case in the Army Hospital Corps quarters, who arrived six days previously from Alexandria, where the disease was prevalent; but taking into consideration the usually non-contagious nature of the disease and its invasion of the sick in hospitals at other places in this and other epidemics, it is most probable that the epidemic, as usual, attacked in hospital and in camp those who were predisposed by disease or debility, but in other respects living under conditions similar to those in barracks.

The weather immediately preceding the epidemic here was unusually close and oppressive, the air, when moving, coming from the east, instead of the usual north wind which usually prevails, and did so again after a short interval.

CHOLERA RETURN.

CHOLERA

No. of Case.	Corps.	Regimental No.	Company.	Rank and Name.	Age.	Service.	Service in Egypt.	Previous Foreign Service.	Where quartered.			At what Duty.
									Barrack.	Block.	Room.	
1	Staff Clerks.	1334	—	Q.-Mr. Sergt. M—— -	34	14	1	Nil.	A.H.C. Ramleh Palace.	N.W.	24	Clerk (on leave) from Alexandria.
2	A.H.C.	4380	—	2/ Corpl. M—— -	21	3	1	1 (Malta).	A.H.C. Ramleh Palace.	N.W. ground floor.	55	Hospital Police.
3	D.C.L.I.	1240	D	Pte. D—— - -	24	4	1	1 (Gibraltar).	Mustapha Pacha.	N.W.	58	Ordinary.
4	D.C.L.I.	759	K	Pte. F—— - -	20			Nil.	Ravelin.	2nd floor.	5	Ordinary.
5	Gordon H'drs.	1	A	Pte. M—— - -	28	10	1	2 years (Cape).	Convalescent	—	—	—
6	D.C.L.I.	788	E	Pte. V—— - -	25	1		Nil.	Mustapha Pacha.	S.	55	Ordinary.
7	R.W.K.	2508	Det.	Pte. T—— - -	20	2	3rd Aug. to 8th Sept. 1883 and 16th Jan. to present date.	Nil.	Ras-el-Tin.	D.	39	Ordinary.
8	D.C.L.I.	23	A	Lance-Corpl. P—— -	23	3	1	(Gibraltar).	Mustapha Pacha.	N.	13	Ordinary.
9	1/ R.A.	30186	5	Gunner B—— -	32	9	1	7 (Bermuda, Canada, Gibraltar, Malta).	Pensionnat Cardahi.	Top floor.	24	Clerk.
10	19 Huss.	1602	H	Pte. W—— - -	26	7	1	Nil.	Mustapha Pacha.	N.	3	Waggoner.
11	A.H.C.	3878	—	Pte. F—— - -	24	5	1	3 years (S. Africa).	Sergeants' room, Central Palace.	Ground floor.	3	Servant to Qr.-Mr. Hynd.
12	1/ R.A.	25317	5	Gunner T—— -	27	8	1	6 (Gibraltar, Malta).	Pensionnat Cardahi.	1st floor.	2	General duty.
13	D.C.L.I.	833	A	Pte. H—— - -	23	1		Nil.	Mustapha Pacha.	N.	47	General duty.
14	D.C.L.I.	1853	D	Pte. H—— - -	21	2	1	(Gibraltar).	Mustapha Pacha.	N.	58	General duty.

Alexandria, 12th Sept. 1883.

RETURN.

Prior to Attack.										After Attack.				No. of Days from		No. of hrs.
Date of original Admission.	Disease.	Disease changed.		Where treated. (Date of change of locality in *Italics.*)						Attack.		Death or Discharge.		1st Admission to Attack.	Attack to Discharge.	Attack to Death.
		Date.	Disease.	Ward. Name	Ward. No.	Ward. Name.	Ward. No.	Hut.	Marquee.	Date.	Time.	Date.	Time.			
—	—	—	—	—	—	—	—	—	—	3/8/83	10 a.m.	3/8/83	11 30 p.m.	—	—	11½
—	—	—	—	—	—	—	—	—	—	4/8/83	7 a.m.	4/8/83	9 0 p.m.	—	—	14
1/8/83	Debility.	—	—	1st floor.	27	—	—	—	—	5/8/83	6 30 p.m.	6/8/83	10 20 p.m.	4½	—	28
2/8/83	Diarrhœa.	—	—	1st floor.	28	—	—	—	—	9/8/83	9 30 a.m.	10/8/83	12 30 a.m.	7	—	15
*9/6/83	Debility.	—	—	1st floor.	19	2nd floor. *18 July*	East.	—	—	10/8/83	4 30 p.m.	20/8/83	Disease changed to debility.	62	10	—
9/7/83	Diarrhœa.	—	—	1st floor.	25	—	—	—	5 *10 Aug.*	11/8/83	5 30 a.m.	14/8/83	9 40 a.m.	2	—	76
12/7/83	Diarrhœa.	—	—	2nd floor.	42	—	—	F. *10 Aug.*	—	12/8/13	3 0 a.m.	12/8/83	3 30 p.m.	31	—	12½
31/7/83	Debility.	11/8/83	Enteric Fever.	1st floor.	3	1st floor.	18 *6 Aug.*	—	—	15/8/83	11 45 a.m.	19/8/83	Disease changed to enteric fever.	15	4	—
26/6/83	Dysentery.	—	—	2nd floor.	40	—	—	—	3 *10 Aug.*	16/8/83	6 30 p.m.	17/8/83	1 0 a.m.	52	—	6½
31/7/83	S. C. fever.	—	—	1st floor, centre corridor.	3	—	—	—	15 *10 Aug.*	17/8/83	10 0 a.m.	17/8/83	12 0 noon.	17	—	2
—	—	—	—	—	—	—	—	—	—	19/8/83	7 30 p.m.	31/8/83	Disease changed to general debility.	—	13	—
5/7/83	Dysentery.	—	—	2nd floor.	44	—	—	—	*10 Aug. 1st position.* 5 *18 Aug. 2d position.*	21/8/83	1 0 a.m.	21/8/83	2 30 p.m.	47	—	13½
31/7/83	Enteric fever.	—	—	1st floor.	3	1st floor.	18 *6 Aug.*	—	18 *Enteric, 17 Aug. East of marquees.*	23/8/83	10 30 a.m.	23/8/83	9 40 p.m.	23	—	11
9/8/83	Ulcer.	—	—	Upper south corridor.	—	—	—	—	16 *11/8/83.*	23/8/83	12 0 noon.	23/8/83	7 0 p.m.	14	—	7

* Transferred from Cairo.

T. W. Fox, D.S.G., P.M.O.

APPENDIX No. V.

TWO CASES OF FRACTURE OF THE SKULL.

By Surgeon S. A. Crick, M.B., M.S., Army Medical Department.

I am induced to record the two following cases, believing they will be read with interest, showing as they do the very different result which may arise from an apparently very similar cause. These two cases occurred within a period of five weeks, both men falling from the same verandah, a height of about 20 feet, both of them being about the same size and weight (11 st. 7 lbs.), and both at the time most probably more or less under the influence of drink. As will shortly be seen, the first was evidently a case of fracture of the base of the skull, from which the patient quickly recovered without a bad symptom, the second, fracture of the vertex and base, which rapidly caused the patient's death.

Case I.

Lance Corporal J. M., aged 23 years. This patient was brought to the hospital in an unconscious state on the evening of the 22nd Sept. 1883. He had evidently been drinking during the day, and whilst sitting on the railings of the verandah he overbalanced himself and fell to the ground. When seen shortly after admission he was found to be completely unconscious; pupils equal, slightly dilated, insensible to light and touch; pulse 70, regular, rather weak; respirations easy, 30 to the minute; temperature normal. There was a free flow of blood of a dark colour from the right ear, but no wound of any description to be found in or around the external meatus. A small quantity of blood had also come from the mouth, its source, however, was not made out. Beyond a small bruise on the right side of the forehead, and a contused and lacerated wound about 2 inches long on the inner side of the left leg, there was no sign of damage to any part of the body.

Two hours after admission consciousness commenced to return, the bleeding from the ear still continued, but was less profuse. About four hours after the accident, and as the hæmorrhage nearly ceased, a large quantity of clear watery fluid escaped from the ear. When seen the following morning the patient had passed a quiet night, the discharge of watery fluid had continued, but in gradually diminishing quantity, and alternating with blood. The patient complains of severe frontal headache, but with this exception feels comparatively well; pupils normal; pulse, temperature, and respiration normal; he recollects nothing of the accident. The progress of this case was quite regular, no bad symptoms occurring up to the date of his discharge, which took place exactly one month after admission. The trickling away of blood continued at intervals for about 24 hours and of the watery fluid in daily diminishing quantity for eight or nine days; headache lasted for three days; no febrile symptoms occurred, and when discharged from hospital his hearing was perfect.

The treatment adopted was very simple, viz., rest in bed with the continued application of an ice-bag to the head and a dose of calomel as a purgative, with a mild non-stimulating diet.

Case II.

Private E. G., 1st Royal Dublin Fusiliers, aged 32 years. This man was found under the verandah of his quarters at 5 o'clock on the morning of 1st Nov. 1883, having nothing on but his shirt, and lying on the ground in an unconscious state. He was present in his barrack room at 11 p.m. the previous night, whether he was sober at that time is a doubtful point; at any rate he appeared to have fallen over the verandah at some period of the night, and to have remained on the ground until found in the early morning, the weather all night being exceedingly wet and boisterous.

I saw the patient about 6 a.m.; his condition was then as follows:—Extremities cold; face pale; does not answer questions, but opens left eye when

spoken to, and from his movements in bed is evidently suffering some pain; pulse full 54; respirations 30, somewhat laboured; temperature in axilla 97·5; left pupil dilated, sensible to light and touch; right pupil contracted and insensible to light and touch; slight drooping of right upper eyelid; there is partial paralysis of motion and sensation on the right side of body, the loss of power being more marked in the upper than lower extremity; there are also well marked jerky movements of the right arm and leg, which are evidently involuntary; no vomiting; a small contused and lacerated wound is noticed about the centre of the forehead, but is of a trivial nature; also a slight bruise over each malar bone, and several minor bruises about chest and limbs. About the outer angle of the left orbit there appears to be a depression of the bony parts, extending over a considerable area.

The patient was kept quiet in bed, an ice-bag applied to the head and warmth to the extremities; a small quantity of brandy was occasionally given by the mouth, and which the patient was able to swallow. Four hours after admission the extremities had regained their warmth, but the unconsciousness had become a little more marked, and the breathing somewhat more laborious; temperature 98; pulse 60. *Nine* hours after admission the paralysis on the right side was decidedly increased, the breathing being stertorous, respirations 48; pulse 60, weak and irregular; temperature 100·8; urine passed in bed; difficulty in swallowing; pupils same as on admission; jerky movements of right arm and leg continue; conjunctival congestion of the left eye, none of right. From this time up to death there was little change, breathing becoming more and more difficult from fluids accumulating in the bronchial tubes, the pulse becoming weaker and more irregular, and the temperature reaching a maximum of 101. The condition of coma very gradually increased from the time of admission up to death, which occurred 20 hours afterwards.

Post-mortem examination.—Rigor mortis well marked six hours after death.

But slight indications of any external injury, viz., a small wound near the centre of the forehead, and slight bruise over each malar bone; considerable effusion of blood between the scalp and cranium, which has evidently oozed out of the separated left fronto-parietal suture; there is also effused blood in the interstices of both temporal muscles, more in the right than the left; the depression noted during life in the region of the left temple is now more marked and evidently due to displacement of the frontal bone; there is marked separation of the left fronto-parietal suture, the separation commencing at the angle formed by the frontal, great wing of spheniod and the anterior-inferior angle of the parietal bones, at this junction separation is greatest, being about ¼ inch. The separation extends along the whole of this suture, gradually diminishing in extent towards the anterior-superior angle of the parietal bone. There is also slight separation of the contiguous right fronto-parietal suture for about 1½ inches in length; a little below the anterior-superior angle of the right parietal bone, and commencing at the point where the separation of the suture ends, is a fissure extending obliquely downwards and backwards for about 2½ inches across the right parietal bone. A second fissure can also be seen extending from the centre of the temporo-parietal (right) articulation obliquely upwards and backwards to within about 1 inch of the former fissure.

Upon removing the skull-cap a considerable amount of dark semi-coagulated blood was found effused between the dura mater and bone on the left side of the head. This had no doubt escaped from the lacerated branch of the middle meningral artery where it crosses the anterior-inferior angle of the parietal bone. The depressions between the convolutions of both sides of the brain were filled with fluid blood. Upon removing the brain the convolutions on the lateral aspect of the left middle lobe of the cerebrum were very much lacerated, so much so in fact that the brain substance and effused blood constituted simply a pulp, a very large tract of brain in this region being quite destroyed; a large amount of hæmorrhage had evidently taken place from the torn brain substance; the convolutions on the upper and under surfaces of the middle lobe were apparently uninjured; a few small patches of laceration were observed on the under surface of the left anterior lobe; no laceration of any other part of the brain was observed; on the right side a small quantity of effused blood was present between the dura mater and the squamous portion of the temporal bone.

At the base of the skull two fissures were noticed in the right middle fossa, involving the great wing of sphenoid and the squamous part of the temporal bone; a third fissure of small extent existed at the outer margin of the left orbital plate of the frontal bone; the small flesh wound on the forehead previously mentioned did not extend to the bone; all the other organs were healthy.

Remarks.

With regard to the first case it is interesting to note to what extent such an important part as the base of the skull may be damaged, and yet the patient present very few symptoms, quickly recovers, and feels none the worse for the injury. I am firmly convinced that fracture of the petrous portion of the temporal bone occurred in this case, both from the source and quantity of the hæmorrhage, but more particularly from the copious discharge of watery fluid which quickly supervened upon the accident. It is very difficult to say which part of the man's head or body struck the ground with such a degree of force as to occasion this fracture. There can be very little doubt that it is quite unnecessary for the head itself to receive the blow in order to occasion fracture of the base of the skull. Whether union of the fractured bone has taken place, or is likely eventually so to do, I am unable to state; at any rate the patient has now been doing his duty for some weeks, feeling perfectly well, but he still runs the chance of some secondary mischief occurring.

In the *second* case the post-mortem examination reveals the exact amount of resulting mischief. In this case I am inclined to the belief that the *right* side of the head was the part which struck the ground with the greatest degree of force, arriving at this conclusion from the fact that the right temporal muscle was more bruised than the left, and that the fissuring of the bones was more marked on the right side, whilst the fronto-parietal suture was separated on the left, but more particularly that nearly the whole of the visible damage to brain substance being on the *left* side, which is accounted for by the blow being received on the *right* side of the head, the brain would necessarily be forced over to the opposite side against the rough uneven petrous portion of the temporal bone. From the jerky movements of the right extremities it was conjectured during life that laceration of the brain had occurred, but it was not thought to be anything like so extensive as the post-mortem examination revealed. Indeed, it is interesting to observe to what extent brain matter may be damaged and yet no immediately fatal result occur. The gradually increasing hæmorrhage with concomitant pressure of course accounted for the symptoms observed during life, and also for the fatal termination.

APPENDIX No. VI.

Death from Snake bite.

CASE OF LIEUT.-COLONEL ————————, 1ST WELSH REGIMENT. AGE, 45 YEARS. SERVICE, 25 YEARS.

By Surgeon-Major HARVIE SCOTT, M.B.

How accident occurred.

On the afternoon of Friday, the 21st September 1883, Colonel ————, in company with the Adjutant of the Regiment, rode out for the purpose of shooting in that part of Zululand near the Lower Tugela River. When the ground was reached where he was going to shoot he dismounted and walked through rather long grass. In a few minutes he felt a sharp pain in the upper part of his left leg, and after the lapse of a few seconds suddenly became sensible of extreme shock to his system, and at once felt certain that a snake had bitten him; he called out to the Adjutant (Mr. Reade), who at once rode up to him and volunteered to cut and suck the affected part, but the Colonel would not permit him to do so, and as he was not more than 10 minutes ride from camp he rode back as fast as his strength would permit. On his arrival in camp I at once saw him, and his condition was as follows:—

Symptoms.

Locally, pain, ecchymosis, swelling and partial paralysis of bitten part. Generally, so great was the exhaustion that he had nearly fallen off his horse; forehead and hands were bathed in a cold clammy perspiration; extremities cold and pale; sinking sensation in epigastrium, great nervous depression, with a sense of impending death; respiration hurried. Almost immediately after arrival in camp bilious vomiting set in, loss of co-ordinating power, numbness of hands, forearms, feet, and lips, with dragging sensation of muscles of the face; intense pain in neck; cough of a troublesome nature; expectoration of tenacious viscid mucus, which was with difficulty removed from the mouth. Pulse at first weak and rapid, 120 per minute, running up afterwards to 150 per minute, and becoming very weak and thready; restlessness (jumping up suddenly in bed) and anxiety becoming most distressing; vomiting ceased at 9 p.m., up to which time he appeared on the whole to be progressing favourably, but after that most grave symptoms developed, viz., sight rapidly became so weak that he could hardly distinguish anything in his tent; the eyelids drooped; speech thick and nasal; paralysis of tongue and soft palate; dysphagia; clonic convulsions of upper extremities and muscles of chest; dyspnœa; stertorous breathing with low muttering. Consciousness remained up to 12.45 a.m., when he last spoke to me, and asked my opinion as to his pulse and chances of recovery; he then lapsed into a semi-comatose condition, and died a little before two o'clock on the morning of the 22nd September, exactly 10 hours subsequent to the fatal bite.

Treatment.

Tight compression was made above the seat of injury between the bite and the heart; wound enlarged and an attempt made to remove all the blood and poison from it. Caustics and ammonia were applied freely to the surface of the wound. Ammonia and diffusible stimulants were administered by mouth. To relieve the distressing vomiting sinapisms were applied to region of stomach, and brandy with soda-water given; the restlessness was combated with hypodermic injections of morphia (½ grain for a dose), the morphia gave great relief, which, however, was only transitory. Hot-water bottles were applied to the feet, and stimulants were given with an unsparing hand, but were not always retained. Ammonia was also injected subcutaneously.

Post-mortem examination made nine hours after death.

Post-mortem examination.

Body well nourished. Cadaveric rigidity well marked. Hypostatic congestion. Great discolouration of scrotum and finger nails. Situation of bite on left leg at upper and inner side of calf, about 3 inches below internal condyle of femur, and immediately over internal saphena vein. Appearance that of a small pin puncture; lower part of leg rather swollen. On removing

the skin from the region of the wound there was found great sero-sanguineous extravasation into the surrounding tissues, and the muscles were soft and infiltrated with blood; the internal saphena vein was punctured. *The venous system* on the left side much congested. *The glands* in left groin, in long axis of limb, enormously enlarged and congested. *Glands* in right groin normal. *Pericardium* normal. *Heart*, right cavities of, full of fluid blood, left cavities, empty, valves healthy, no clots. *Lungs* normal. *Liver* congested and slightly enlarged. *Gall bladder* fully distended. *Spleen* somewhat enlarged, otherwise normal. *Stomach* slightly congested, rugæ well marked; contents, a small quantity of glairy mucus. *Kidneys* normal. *Omentum* contained much adipose tissue. *Intestines* normal. *Bladder* normal, contained a small quantity of urine. *Brain* somewhat congested, otherwise normal. *Blood* in a fluid state.

Remarks. The snake which inflicted the fatal wound was not seen; in all probability Colonel M———— trod on one asleep, which then struck at him. The systemic shock was at once apparent after receipt of the injury, which is accounted for by the puncture of the internal saphena vein, and the introduction of the poison direct into the general circulation. The clothing traversed by the fang of the snake was, 1st, cloth gaiter, 2nd, karkee riding breeches, 3rd, drawers of light material. From the high situation of the puncture, the opinion of competent judges was that the snake which inflicted the wound was a "black mamba."

Fort Curtis, Etshowe, Zululand,
10th November 1883.

APPENDIX No. VII.

REPORT ON AN OUTBREAK OF SICKNESS AMONG THE CREW OF THE WAR DEPARTMENT SHIP "STANLEY," ON HER RETURN FROM THE MEDITERRANEAN IN SEPTEMBER 1883.

By Surgeon-Major C. H. GODWIN, A.M.D.

The War Department steam ship "Stanley" was ordered, in the month of July 1883, to take two 100-ton guns to the Mediterranean, and leave one at Gibraltar and the other at Malta.

Her dates were as follows:—

Sailed from Woolwich 20 July 1883;
Arrived at Devonport 22 July 1883;
Sailed from „ 24 July 1883;
Arrived at Gibraltar 30 July 1883;
Sailed from „ 6 August 1883;
Arrived at Malta 11 August 1883;
Sailed from „ 30 August 1883;
Arrived at Gibraltar 5 September 1883;
Sailed from „ 11 September 1883;
Arrived at Woolwich 19 September 1883;

61 days in all. Her crew consisted of 18 hands.

History of the voyage.

The voyage was uneventful. No sickness was logged beyond two entries for slight injuries; but the 1st engineer, Mr. Colyer, had some slight diarrhœa after leaving Gibraltar on the return voyage. The crew appeared well, and no sickness was reported on the arrival of the ship at Woolwich on the 19th September 1883.

The rations had consisted of fresh meat, vegetables, and bread procured at the markets of the different places where the ship touched, and as her tanks were small, and limited usually to two deck tanks, she took in water at each port. On this voyage, however, a third tank in the forehold was added, which was filled for the first and only time at Devonport, and was kept as a reserve. Water from this tank was only used on the 4th September, a day out from Gibraltar on the return voyage, when the other supplies had run short, and in the Downs, when the boys found out a method of filling their buckets from the top, the tap being under lock and key, which latter was kept by the 2nd mate; a day or two after this the tank was emptied and removed.

The ship soon loaded up again, and on the 9th October sailed for Portsmouth with the same crew, with three exceptions, namely, Stoker G. Bridge, who had been paid up and discharged, Stoker H. Long, who remained behind sick (27th September 1883), and had been complaining of cold and sore throat, and O. S. G. Eve, who had been sent to his home on the 3rd October with what was reported as remittent fever. Chief Engineer Colyer had been placed on the sick list on 2nd October with catarrhal symptoms, but feeling better, and being desirous of rejoining his ship, he returned to duty on the 5th October and went with her to Portsmouth on the 9th.

Boy Langmaid had also been placed on the sick list with catarrh on 2nd October; he returned to duty on the 6th, but he was not well, and he soon had to report sick again. Up to this time no attention had been drawn to the ship she had left with a healthy crew in July, and returned apparently with the same in September, and took up her usual coasting duties without remark. But it was destined that more should be heard about the "Stanley" and her Mediterranean voyage.

Account of the outbreak of illness.

It is the practice that all records of sickness occurring amongst the employés of the Ordnance Commissariat Department are kept in the books of the Medical Department of the Royal Arsenal. Soon medical certificates began to

arrive reporting three cases of enteric fever. In the meantime Stoker H. Long, who remained at Woolwich, had shown the usual signs of enteric fever with severe hæmorrhage, and had died.

I then wrote to the Commissary-General, calling his attention to this outbreak of enteric fever amongst the crew of the "Stanley," and suggested a thorough examination of the ship then at Portsmouth. This officer had, however, himself noticed this sickness, and had ordered an inquiry. A copy of the Sanitary Officer's report is attached. Nothing was found amiss with the ship; her bilges were sweet and she was said to be clean. Some precautionary recommendations were made, which were duly carried out.

Men continued, however, to fall ill, and eventually nine men, besides the stoker who died, were laid up with what I think we must believe in each case to have been enteric fever, though possibly G. Eve's case might be doubtful—a sick rate of 55·5 per cent.!

Nature of the illness.

The form of sickness needs a few special remarks. In six cases, as those of H. Long, F. Reynolds, T. Ogle, T. Cowdry, R. J. Colyer, and W. Gillespie, enteric fever seems to have been at once recognised; but two, W. Horton and the master, T. M. Moors, were reported to be suffering from simple continued fever and G. Eve from remittent fever. A return, showing the rating, names, and sickness of the crew, is attached. Before attempting to account for all this sickness it will be interesting to give a short account of each case.

The Master T. M. Moors.

The master, T. M. Moors, was placed on the sick list on 16th October, at Portsmouth, by Surgeon Mapleton, A.M.D., with simple continued fever. He was reported fit for duty on the 16th November, and again placed on the sick list on 23rd November by Dr. Doyle, of Southsea, who wrote "that he was suffering "from nervous prostration and a form of intermittent for some weeks, and "now has a relapse." Dr. Doyle also says, "He has never since the beginning of his illness had any rise of temperature or pulse, nor has there been "any appearance of an eruption nor any gurgling in his fossæ or tympanitis; "on the other hand, his bowels have been somewhat relaxed, but this is said "to be habitual to him; his skin is dusky, his tongue foul, and his appetite "gone. In view of the history of the other cases, I have no doubt at all that "he is suffering from the same blood poisoning as the other men, though it is "hard to pronounce it typhoid poison. The most typical symptom which I "have seen was the sudden relapse which he took while convalescing." On the 18th January 1884 he again writes: "Mr. T. M. Moors is now becoming "gradually convalescent, but needs complete rest and change, otherwise his "illness may be indefinitely prolonged." His illness up to date has been continuous since the 16th October.

1st Engineer R. J. Colyer.

First Engineer R. J. Colyer came on 2nd October, complaining of catarrhal symptoms, hoarseness, &c., and seemed so poorly as to require rest. On the 5th October, however, he expressed himself as so much better and so desirous of returning to his duty that he was discharged from the sick list but continued to take quinine, and left in his ship for Portsmouth on the 9th October. While there he was very unwell, weak, out of sorts, and generally poorly, which led to his doctor remarking "that he had had a narrow escape from enteric fever." On the 16th November he was placed on the sick list, and went through a decided attack of enteric fever in which diarrhœa never gave trouble, though not altogether absent; he had the specific eruption, dry tongue, peculiar listless appearance, tenderness and gurgling in right iliac fossa, tympanitis, subsultus tendinum, delirium with intense prostration and high evening temperatures. On 30th December, when convalescence was commencing, he had thrombosis of the femoral vein of the right leg and a fresh accession of pyrexia. The thrombi gradually cleared away, and now he is convalescent though very weak. He was never well after the 2nd October, but the enteric symptoms were not recognised until November, when his case became clear enough.

2nd Engineer W. Gillespie.

Second Engineer W. Gillespie came for the first time on the 3rd December, complaining of general malaise, weakness, and inability to do his work; had no diarrhœa, and would not allow that he had been unwell in any way; but his wife stated that he was poorly with bronchial catarrh soon after coming home, and that he had never been exactly the thing since his return from Gibraltar, but had been languid and not himself. His illness was marked by

sluggishness of bowels, sleeplessness, heavy look; had to be roused to answer questions, sickness, dry tongue, high temperature in evening with perspirations, tenderness in right iliac fossa, doubtful spots; when convalescing had severe sciatica, which required the hypodermic use of morphia. He is convalescing very slowly, and still has sciatica, but none in the other leg. He has never had any sickness in his life, and now does not own to any before the 3rd December, but he was very nervous about himself in consequence of so many men falling ill.

Stoker H. Long. Stoker H. Long, aged 27, came up complaining on the 25th September with catarrhal symptoms and evidence of pneumonia; diarrhœa became severe, rose spots appeared, hæmorrhage occurred, and he died on the 18th October.

Stoker F. Reynolds. Stoker F. Reynolds was placed on the sick list on the 18th October with enteric fever, and sent into the Station Hospital at Portsmouth.

A.B. T. Ogle. A. B. T. Ogle was placed on the sick list immediately on arrival at Portsmouth, on the 11th October, and sent into the Station Hospital. He is still absent though convalescent.

A.B. D. Horton. A. B. D. Horton was placed on the sick list on 22nd October with simple continued fever, and sent to his home at Devonport, where his disease was recognised as enteric. The medical officer writes: "The disease has apparently "existed 12 or 13 days. It ran an uncomplicated course; there was no "diarrhœa; in fact the opposite. A relapse took place after the temperature "had been normal a week." He remains absent at present.

O. S. G. Eve. O. S. G. Eve was placed on the sick list on the 3rd October, and went to his home at Sheerness with what was reported to be "remittent fever." The medical officer writes (30/11/83). "His illness appears to be an ordinary but "pretty sharp attack of remittent fever. His temperature at one time rose to "105° F., but he never had any diarrhœa, abdominal pain, eruption, or other "symptom of typhoid; the temperature became normal on about the eighth "day. On 10th October he came to hospital, and said he was quite well, but "weak. On the 20th October he again complained of pains in his limbs, "and that he had not been able to return to Woolwich. His temperature "was then normal." On the 27th November he returned to his duty well and strong.

Boy T. Cowdry. Boy T. Cowdry, aged 20, was placed on the sick list on 12th October, and admitted into hospital at Portsmouth with enteric fever. This case progressed satisfactorily, and he was discharged to his home on 25th December. He was reported fit for duty 1st February 1884.

Boy T. Langmaid. Boy T. Langmaid was placed on the sick list on 2nd October with catarrhal symptoms. He improved, and returned to his duty on the 6th October. On the 12th October, at Portsmouth, he was again placed on the sick list, and left for his home at Devonport, where the medical officer writes about him as for Horton, "Both cases of enteric fever, came here ill with the disease, "which had apparently existed about 12 or 13 days before their arrival. It ran "an uncomplicated course, there was no diarrhœa, in fact the opposite; in both "cases a relapse took place after the temperature had been normal a week." He was reported fit for duty 1st February 1884.

The remaining eight men, one of whom was discharged and lost sight of, have continued in good health, and have not been at all affected.

Peculiarities of the outbreak. The peculiarities of this sickness, which has affected so many men in one ship, are its lengthened incubation and the absence of diarrhœa. But the presence of the eruption, the relapses, the character of some of the abdominal symptoms, as tympanitis, tenderness, and gurgling in right iliac fossa, the intense prostration, the general aspect, and, in some instances, subsultus tendinum and evening temperatures, all prove the enteric character of the disease, as also the fact of 10 men out of a crew of 18 suffering from it points to some common cause acting generally.

The insidious manner of the attack in most of the cases must be noticed. At first, before suspicion as to the real nature of the illness was aroused, the catarrhal symptoms claimed chief attention. This was notably the case with Colyer, who came first under notice on 2nd October, but did not show decided symptoms before 26th November.

In Long's case the bronchial and pneumonic symptoms drew first attention on 25th September; he died on 18th October. Langmaid again complained

of a cold with slight bronchial symptoms on 2nd October, but on the 12th his case developed itself.

In none of the cases that came under my own notice was diarrhœa a prominent symptom; in Long's case it was severe. Colyer had it slightly, Gillespie not at all. Mr. Moors is reported to have had it slightly; Eve had none, but the relapses and the prostration have been most marked.

The period of incubation has been most remarkable; the first case, and the most severe, H. Long, commenced as soon as the 25th September, six days after landing, and 11 from Gibraltar; the last, Gillespie, on 3rd December, the 83rd day from Gibraltar and 75th after landing.

Dr. Murchison, in his "Fevers of Great Britain," remarks: "There is "difficulty often in deciding when an attack of enteric fever has really com- "menced. Incubation is usually not longer than 21 days. De la Harpe "infers from 21 cases that it varies from 6 days to 11 weeks." Gillespie owns to nothing amiss until the 83rd day after leaving Gibraltar.

In no case have I heard of the disease spreading to any member of their families.

Accommodation. The master and the two mates had each a cabin leading off from the aft saloon. The two engineers had separate cabins, approached by a hatchway of their own, and the rest of the crew were accommodated in a very comfortable dry forecastle. There is a closet leading out of the after saloon, and one near the head of the ship; this latter is said to have been practically the only one used by all hands.

The older men have been equally sufferers with the younger, and the general impression on all sides is that their illness was caused by the foul stinks to which they were exposed at Gibraltar; to this reference will be made again.

Provisions. The ship was provisioned in case of accident, but the men lived in messes furnished with fresh provisions obtained from the different ports at which they touched. Preserved milk was used on board and fresh milk was freely bought and drank at Malta.

Water supply. The water was carried in two tanks upon the deck, one of which was a filter tank. For this voyage a third tank was placed in forehold. The keys of the several tanks were kept by the 2nd mate, R. Thompson, who was responsible for the water. Before leaving Woolwich on 30th July the two deck tanks were filled up from the hydrant on the wharf of the arsenal with Kent Water-works water.

At Devonport on 22nd July the two deck tanks were replenished, and the third or reserve tank in the forehold was now filled for the first time. The water was obtained from a hydrant upon the gun wharf. This water needs remark. It appears that at this station one hydrant on the gun wharf gives delivery to two kinds of water. One quality is furnished from two reservoirs, which are filled by the surface water from the trench, and this water charged the hydrant during the night and up to 10 a.m., and is intended to be used only in case of fire and for filling ship's boilers.

The other quality which is turned on at 10 a.m. is supplied from the reservoir at Granby Barracks and comes from the town supply.

The local authorities are quite clear that the ship's tanks were filled with this good quality water, but it is evident that a danger must be ever present from this mode of delivering water which could be quite removed by placing a second hydrant. The two deck tanks were replenished again at Gibraltar from the dockyard.

The water at Malta was obtained at one time from the naval tank ship "Chester," which does not seem by the statement of the 1st mate to have been very clear (statement attached), and also by private purchase; a full account of which is given in the report of the Commander-in-Chief at Malta, and attached to this report.

Up to this time the reserve tank filled with Devonport water had not been touched, but between Malta and Gibraltar the supply running short, general use was made of the tank on 4th September. The next day a fresh supply for the two deck tanks was obtained from the naval tank ship at Gibraltar. The reserve tank was not used again until arrival in the Downs, when the boys found a way of getting at it, though the tap was locked. No complaint, however, appears to have been made about the water.

When inquiring into the cause of enteric fever the quality of the drinking water obviously demands the closest inspection. The tanks (deck) were filled at Woolwich with Kent Waterworks water, which needs no comment; at Gibraltar the water was obtained from the naval tank, which supplies the men-of-war, and this probably was good. The water obtained from the tank "Chester," at Malta, by the statement of the 1st mate, was anything but good, it contained infusoria, &c. visible to the naked eye, and required boiling and filtering. The water purchased seemed to have been of the quality supplied to everybody, and was thought to be good; and lastly, I revert again to Devonport and its supply. Here is one hydrant with two qualities of water, one the surface water of the trench and the other a waterworks supply. The kind of water delivered by the hydrant depends upon cocks at some distance. The ship took in both kinds, she filled up her boilers with the impure and her drinking water tanks with the good. She commenced taking in the water before 9 a.m., and did not finish before late in the afternoon for want of sufficient pressure.

The 2nd mate, R. Thompson, says, "he was in charge of the water tanks "on board the 'Stanley,' the reserve tank was not filled up at Woolwich; on "arrival at Devonport he thought it advisable to fill up the third or reserve "tank at the same time that the others were filled up, they commenced about "9 a.m., but he does not know what water was on the hydrant at that time, "there was some difficulty in getting the water, it was not completed until "late in the afternoon for want of sufficient pressure."

I have already mentioned that the third or reserve tank, which contained Devonport water only, was not used, except on the 4th September, when other supplies had run short, and in the Downs. I do not, however, dwell more on this possible source of the outbreak, because I now approach a much more probable and formidable danger to which the crew were exposed on two occasions, from 30th July to 5th August, and from the 5th to the 11th September.

Gibraltar sewers

Near the mole, alongside which the ship was moored, is a new ventilating shaft of the Gibraltar sewers. It is stated that when the wind was east it blew over the top of the rock came down its side as a draught passed over the mouth of the shaft and brought the putrid gases right down upon the ship, and this was felt more with a moderate breeze than when it blew harder, as then the gases were blown out to sea. The stench on board is said to have been of such a sickening horrible kind as obliged them to close their ports, hatches, &c. to try and keep it out, but they could not, besides, with certain states of the tide, the sewage floated up around the ship.

I append to this report a return of the zymotic diseases at Gibraltar during the months of July, August, and September occurring amongst the English garrison, a few cases of enteric fever are shown and a great many of simple continued fever.

Dr. Murchison remarks, in his "Fevers of Great Britain," "most of the "febrile attacks known in this country as simple continued fever or febricula "are abortive attacks of enteric fever."

Be this as it may in this country; the returns only show the sickness and mortality of English soldiers, the drains contain the excreta of the civil population as well as probably some specific discharges from enteric cases, even, if not, there is no fact better known in the etiology of enteric fever than that the exposure of individuals to the products of fermenting filth frequently gives rise to outbreaks of this illness where no specific enteric fever discharge can possibly have been present. Numerous instances could be quoted to this effect. In this case, however, the specific matter was not wanting, and the crew were exposed day and night for five days on the last occasion to the most horrible smells from the ventilating shaft. Some of them had headaches and sickness, one, Colyer, seems to have had diarrhœa, but the symptoms passed off under the tonic influence of fresh sea air, but the poison was only incubating. They landed eight days afterwards, many of them in a lowered state of health, complaining of colds, chilliness, bronchitis, &c.

On the 25th September, six days after landing, one, H. Long, was too ill to keep up any longer, he showed at first signs of pneumonia, later on unmistakeable enteric symptoms, and died on the 18th October. Reports of other cases quickly came on, and continued to do so up to 3rd December, when the

last one occurred, 83 days after leaving Gibraltar and 75 after arrival in England.

A report of the Medical Officer of Health, Gibraltar, is appended, and also one from the Sanitary Commissioners, Gibraltar.

This report states that the ventilators were at the time particularly offensive, and attempts were made to remedy this by introducing pans of charcoal; they also note that there was very little enteric disease at Gibraltar during the past year. The Medical Officer of Health, moreover, shows that during both the times the "Stanley" was at Gibraltar east winds prevailed. Thus on both occasions the men were well exposed to the poisonous fumes from the ventilating shaft.

Great stress is laid upon the fact that little enteric (or typhoid) was present in the district of Gibraltar, but, as I have mentioned before, it is believed by a great number of the most competent observers that the gases of putrefying filth are capable of producing this fever, and in this way outbreaks of enteric fever are to be accounted for in houses where some drain from them becomes choked and where there had been no previous history of enteric. Again, new comers are certainly more easily affected than those who have become inured or accustomed to the abnormal condition whether of impure air or water.

Thus the history of the outbreak shows that the men were exposed to some condition acting on the crew generally.

At Malta they ate fruit abundantly and drank freely of purchased milk, about which no complaint seems to have been made, and the water obtained though in one instance not very clear yet was of the same kind as was supplied to the whole of Her Majesty's ships and residents generally.

While at Gibraltar on both occasions they were exposed to gaseous products of the main sewer of the district borne down upon them from the mouth of the ventilator by the prevailing east winds, which produced at once headache and nausea, and ultimately, I think, illness of a more decided type.

LIST of the CREW of the "STANLEY," and showing the Sickness that has occurred among them since the arrival of the Ship in England from the Mediterranean on the 19th September 1883.

No.	Rating.	Name.	Period.		Disease.	Medical Officer and Place.	Period.		Disease.	Medical Officer and Place.	Remarks.
			From	To			From	To			
1	Master	Moors, T. N.	16/10/83	16/11/83	S. C. fever	Dr. Mapleton, Portsmouth.	23/11/83	—	Enteric fever	Dr. Doyle, Southsea.	Ill at present.
2	Mate	Hooper, A.	—	—	—	—	—	—	—	—	Has not been ill.
3	Quarter-master.	Thompson, R.	—	—	—	—	—	—	—	—	Do.
4	1st Engineer.	Colyer, R. J.	2/10/83	3/10/83	Catarrh	Dr. Godwin, Woolwich.	16/11/83	—	Enteric fever	Woolwich	Ill at present.
5	2nd Engineer.	Gillespie, W.	—	—	—	—	3112/83	—	Do.	Do.	Do.
6	L. Stoker	Pike, G.	—	—	—	—	—	—	—	—	Has not been present.
7	„	Young, W	—	—	—	—	—	—	—	—	Do.
8	Stoker	Long, H.	25/9/83	18/10/83	Enteric fever	Dr. Long, Plumstead.	—	—	—	—	Died 18 Oct. 1883.
9	„	Jennings, J.	—	—	—	—	—	—	—	—	Has not been ill.
10	„	Bridge, G.	—	—	—	—	—	—	—	—	Discharged on return of the vessel, services not required; lost sight of.
11	„	Reynolds. F.	18/10/83	1/2/84	Enteric fever	Dr. Grunud, Portsmouth.	—	—	—	—	Ill at present.
12	A.B.	Hitches, W.	—	—	—	—	—	—	—	—	Has not been ill.
13	„	Ogle, T.	11/10/83	—	Enteric fever	Dr. Mapleton, Portsmouth.	—	—	—	—	Ill at present.
14	„	Horton, D.	22/10/83	—	„	„	—	—	—	—	Do.
15	O.G.	Elliott, C.	—	—	—	—	—	—	—	—	Has not been ill.
16	„	Eve, G.	3/10/83	27/11/83	Remittent fever	Dr. Pope, Sheerness.	—	—	—	—	Recovered.
17	Boy	Cowdry, T.	12/10/83	1/2/84	Enteric fever	Dr. Mapleton, Portsmouth.	—	—	—	—	Ill at present.
18	„	Langmaid, J.	2/10/83	6/10/83	Catarrh	Dr. Godwin, Woolwich.	12/10/83	1/2/84	Enteric fever	Dr. Mapleton. Portsmouth.	Do.

NOTE.—All the crew had been several times to the Mediterranean before this last voyage.

STATEMENT of the MASTER of the "STANLEY," F. M. MOORS.

1. There is a ventilating shaft of a sewer not far outside the new mole in dockyard gate at Gibraltar, from this shaft we used occasionally to get very offensive smells.

2. It might have been the fresh water which we were drinking the latter part of our stay at Malta and obliged to purchase from private individuals, on all other occasions the water was supplied by the dockyard officials, but at the time we purchased the water the Government tank supply vessel was in dock under repair.

The water at Gibraltar was supplied by the dockyard and, I believe, was good, in fact, I may say that I do not remember any complaints being made against the water that was consumed during the voyage.

Provision, fruit, &c. at Malta were purchased in Valetta, at Gibraltar in the market place. Never at any time have I seen anything unwholesome come on board.

The "Stanley" during the whole voyage was kept perfectly clean, and all ventilation given below that was possible.

I believe my illness to have been caused by the sewer shaft at Gibraltar.

STATEMENT of MR. HOOPER, late Mate of the "STANLEY".

At Malta the first water supply was obtained from the Government tank "Chester," which supplied H.M. ships, and in this water he noticed insect life distinctly, so much so that he brought it to the knowledge of the master, who ordered all water used for drinking purposes in the cabin should be boiled first, and the crew were directed to use only filtered water. The second supply of water at Malta was obtained from a private firm, and was good, but it was filled into the same tanks in which the first supply was stored without their having been cleared out. At Gibraltar water was again procured from the Government floating tank, and also from the dockyard, and was believed to be good enough.

The crew at Malta eat plenty of fruit, and in some instances were attacked with diarrhœa.

During the whole time the "Stanley" lay at Gibraltar she was close under a ventilating shaft of one of the town drains, and when the wind was in the east the sewage was drifted right down on the vessel, which was most offensive, inducing headache. The whole ship was permeated with foul smells, and most of the crew complained more or less of the evil effects of this drain.

He thinks it most probable that the illness of the crew arose from this cause.

The ship itself was quite healthy, and the sanitary arrangements were always most carefully looked after.

From H. E. General Sir A. BORTON, Commander-in-Chief, Malta,
to Q.M.G., Horse Guards, W.C.

SIR, The Palace, Malta, December 31, 1883.

WITH reference to your letter of the 4th instant, 57/22/4223, I have the honour to inform you that the tank "Chester" is in charge of the naval authorities; water from it was procured by the master of the "Stanley," by application to Staff-Captain Dyer, R.N., on 15th August last, when he obtained four tons. The "Stanley" was also supplied on 23rd and 29th of August by payment, from Mr. Joseph Bennett, on each of these occasions the ship received 2½ tons of water. Staff-Captain Dyer, R.N., reports as follows with reference to tank "Chester":—

"The water that was given from tank 'Chester' on 15th August last to "the tank of the 'Stanley' was obtained from the same reservoir, the same 'pipes and same cock as all the private tanks, the civil government allowing "us to use it by night so as not to interfere with the private trade by day.

"The water was supplied by the same tank vessel to the various ships in "harbour, the officers' and employés' houses, victualling yard, naval hospital, "rifle ranges, and transports. The tank was in daily use, in perfect order, "and the water (which we all drank) good. 712 tons of it were supplied to "various places during that month, and 1,112 tons during the following month. "The tank is thoroughly cleaned once a month, and always inspected before "refilling a fresh load, and probably if the cause of fever was from the water "the 'Stanley's' own tanks must have been foul."

RETURN showing the number of admissions and deaths at Gibraltar, under General Diseases, Subdivision A, during the three months July, August, and September 1883.

Disease.	July.		August.		September.		Total.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Enteric fever -	—	—	2	1	2	—	4	1
S. C. fever - -	108	1	120	—	46	—	283	1
Febricula - -	—	—	—	—	—	—	—	—
Ague - -	1	—	—	—	—	—	1	—
Remittent fever -	—	—	—	—	—	—	—	—
Erysipelas - -	1	—	—	—	—	—	1	—
Total General Diseases, Subdivision A. - -	110	1	131	1	48	—	289	2

COPY of SANITARY REPORT of War Office Ship "STANLEY," at Portsmouth.

IN compliance with your instructions I visited the War Department steamer "Stanley" this afternoon. I found the quarters for the men and the cabins for the officers in a good sanitary condition. I inquired into the state of the bilge, and ascertained it was well cleaned out about five weeks since, and so far as I could judge is now sweet and wholesome.

I inspected the water tanks which contained water taken in at Woolwich since the occurrence of the first cases. The ship has lately returned from Gibraltar, where she lay three weeks, and at which port the water supply was taken in which was in use before the occurrence of the fever.

The officers state there has been sickness of a febrile nature among the officers and crew both during and since their late service in the Mediterranean, and the prevailing sickness would appear to have been contracted at Gibraltar, and possibly caused by the water taken in there.

The ship's water tanks required to be cleansed and lime-washed and the filter repaired; the charcoal is said to be unserviceable. I would also recommend that the bedding used by sick men be exchanged before the arrival of fresh hands, and that as a precautionary measure disinfectants be used in the bilge and forecastle.

(Signed) R. WEBB,
Brigade Surgeon,
Sanitary Medical Officer.

Portsmouth,
17th October 1883.

P.S.—I am informed that a good deal of fever has occurred at Gibraltar this season.

Sanitary Commissioners' Office, Gibraltar,
December 17, 1883.

SIR,

I HAVE the honour to acknowledge the receipt of your memorandum, dated the 13th instant, together with the correspondence attached thereto, requesting me to furnish a report on the subject of a serious outbreak of typhoid fever amongst the crew of the War Department vessel "Stanley" since her return to England.

The outbreak is supposed to have arisen from the crew having been mephitically influenced during her stay here by an offensive odour from the ventilating shaft of the main drain which is situated near the dockyard. It appears, on inquiry, that the above-named vessel was in Gibraltar on two occasions during the past summer, namely, from July 28th to August 6th, on her outward voyage, and again on her return from Malta, from the 5th till the 11th of September, and the Commissioners will perhaps recollect that at about the period included within those dates, and before it was fitted with a tray of charcoal, complaints reached them of the offensiveness of the smell proceeding from the shaft in question.

Referring to the above dates it will be observed that the length of stay of the vessel was about the same on both occasions, and I have found that she was subject to other similar conditions, she was moored in the same place alongside the new mole, and the direction of the wind was nearly or practically the same. Thus during her first stay out of 18 recorded observations it is noted as having been east 15 times (or from the ventilating shaft towards the vessel) and west three times, and during the second stay of seven days out of 14 observations it was east 10 and west four times.

There appears, however, to have been no typhoid fever succeeding the first visit.

This is an important point in following the inquiry into the origin of the fever, and would obviously tend to throw a doubt upon the supposition that it was attributed to the cause alleged, neither would the assumption appear to derive support from the experience we have had of typhoid fever during this year in the south district of Gibraltar. For the staff and employés of the Dockyard, the residents of the new Mole Parade, and many of whose houses are closer to the shaft than the vessel was at her moorings, have enjoyed a remarkable immunity from this disease. There have been only two cases of typhoid fever reported to the Sanitary Commissioners by the district and private medical practitioners since the 1st of January, and in both instances it was possible to assign adequate causes for its appearance in insanitary conditions as regards the drainage and water supply of the houses the patients occupied. Both cases formed the subject of special reports to the Commissioners at the time.

In conclusion then I do not find that there are grounds for assenting to the supposition that the fever had its origin as stated in the correspondence in sewer shaft emanations.

I have, &c.
(Signed) F. P. STAPLES, S.M.,
Officer of Health.

To the Secretary,
Sanitary Commissioners,
Gibraltar.

REPORT of SANITARY COMMISSIONERS on outbreak of TYPHOID FEVER on board the "STANLEY."

Sanitary Commissioners' Office, Gibraltar,
December 24, 1883.

Surgeon Major F. P. Staples, A.M.D.

THE Commissioners in forwarding for perusal the very full report of their Officer of Health on the subject attached, desire to call particular attention to the following facts therein mentioned:—

(*a.*) That the residents of the district of Gibraltar, near the new mole shaft, permanently subjected to its influence, have enjoyed a remarkable immunity from typhoid fever this year. Number of residents about 600.

(*b.*) That in the whole of Gibraltar only two cases of typhoid fever have occurred which are assignable to other causes.

2. On examination in detail of the statements of complaints, the Commissioners beg to point out that the master reports that he has had a narrow escape of typhoid fever only; and they here remark that all ventilators in Gibraltar, wherever situated, are peculiarly unpleasant during the summer levanters or east winds.

3. The statement of the mate that sewage drifted right down on the ship during the east wind is at variance with truth and general experience.

4. Mr. Monkhouse, civil engineer to H.M. Dockyard, whose position and duties render him specially qualified to judge, and Commander F. Baker, R.N., the captain of the port, who said that he had never heard of such a complaint from any vessel or yacht berthed in the "Stanley's" position or neighbourhood, completely refute this statement.

5. The fact of the "Stanley" having been at Malta may, in the Commissioners opinion, be sufficient to account for the outbreak. They are not in possession of the Malta Health Returns, but are informed that typhoid fever prevailed extensively in the eastern Mediterranean ports this summer.

7. The Commissioners trust that the above facts will completely disprove the connexion of Gibraltar ventilators or sewage with the serious outbreak of typhoid fever on board the War Department vessel "Stanley."

(By Order) C. H. GORDON,
Captain Royal Engineers,
Chairman.

APPENDIX No. VIII.

EXTRACTS FROM SPECIAL REPORT ON OUTBREAK OF ENTERIC FEVER AMONGST THE TROOPS STATIONED AT ATHLONE IN THE MONTHS OF MARCH AND APRIL 1883.

By Surgeon-Major M. KNOX, A.M.D.

Water as a cause.

THE ordinary water supply for the barracks at Athlone is taken from the River Shannon, about one quarter of a mile above the town; it is conducted through filter beds of gravel and sand, and pumped by an engine into two iron storage tanks situated at the highest point in the barracks, from thence by pipes it is distributed throughout the barracks.

There is also situated in the prison yard a large well, it is surrounded by married quarters and in a confined space; surface drains cross this yard. This well appears to be partly fed by a spring and partly fed by a pipe leading directly into the Shannon. Affixed to the well there is a pump worked by horse-power and a pipe leading into the storage tanks, so it will be seen that in case there is any reason to prevent the engine filling the tanks with filtered water unfiltered water from this well can be forced into the tanks.

On the 7th of March, without any notice to any of the local authorities, the engineers cut off the supply of filtered water for the purpose of putting up a new engine, and filled the storage tanks from the well in the prison yard, which had been lying disused since the month of September 1882.

On the 19th of March diarrhœa had become very prevalent amongst the troops in barracks, including officers, women, and children; in fact, every second person was suffering, and in conjunction with the Officer Commanding, I made a close examination into the causes that could lead to this disease. I then discovered for the first time that the water supply had been changed. I examined the water from the well with Condy's Fluid but failed to detect organic matter; this result I afterwards found to be due to the well having been continually in use since the 7th instant, as afterwards when the well was disused for a few days organic matter could be detected at once on the addition of Condy's Fluid. I made careful inquiries in the town, and there was no prevalence of diarrhœa amongst the civil population, and the families of soldiers married without leave residing in the town who drew their water from the town supply were comparatively free from diarrhœa. Consequently the only conclusion that was open to me was that the well water was the cause of the disease.

Strong and urgent representations were made by the Commanding Officer and myself to the engineer to hasten with the work of putting up the new engine, and on the 23rd March the filtered water was again laid on in barracks, the storage tanks having first been cleaned out on my recommendation. From that date the diarrhœa rapidly decreased, and by the middle of April it had disappeared.

On the 28th of March a man of the 18th Hussars was admitted to hospital with symptoms of bronchitis; he was feverish, and his bowels were relaxed.

On the 5th of April a man in the Artillery was admitted with feverish symptoms and diarrhœa. On the 9th of April these patients were well-marked cases of enteric fever, and were accordingly diagnosed as such. On the 8th of April two cases from the 1st North Stafford Regiment were admitted, which were recognised the following day as enteric fever. Between the 9th and 13th six cases were admitted and two diagnosed. In consultation with the Deputy Surgeon-General, Dublin District, the six remaining cases were diagnosed on the 15th, also two cases in children resident in barracks. On the 16th two cases occurred in the family of a barrack sergeant resident in the barracks.

On the 24th of April a case from the Artillery was admitted, and on the 25th another case was admitted, which proved to be the last of the outbreak.

In all there were 18 cases :—

	Men.	Children.
18th Hussars - - -	1	1
Artillery - - - -	7	1
1st North Stafford Regiment -	6	–
Barrack Department - -	–	2
(Not on Strength) - - -	–	–
Total - -	14	4
Fatal cases - - -	2	–

The cases as shown by above table were distributed throughout the barracks, the Artillery giving the largest proportion, and amongst the Artillery six out of the seven came from the half battery living in the ground rooms, Artillery Square. I carefully examined these rooms and had a portion of the floor of one room taken up without finding any particular sanitary defect. I was assured by the engineer that there were no drains in the vicinity. I also examined the Hussars', Infantry Barracks, and Married quarters without discovering anything to account for the outbreak.

The general sanitary condition of latrines, urinals, and surface drainage was good; there were three open privies, which I caused to be closed up; also there were three pumps marked "Water unfit for drinking purposes." I had these pumps locked up so as to make it impossible to draw water from them; also on my recommendation the filtered water was laid on throughout the barracks from 6 a.m. to 9 p.m.

The first case was admitted on 28th March, the last case on the 25th of April. There was one history common to all the cases, that was, that they had suffered from diarrhœa during the time they had been drinking well water. This well water was supplied to the troops in barracks between the 7th and 23rd of March. Although there appears to be a month's interval between the cessation of the well water supply and the last case, one must take into consideration that the last men admitted dated their diarrhœa and languor back for a considerable time. To me it appears clear that whilst the use of this particular water produced diarrhœa in almost all who drank it, in those susceptible of enteric fever poison there was a period of incubation of from one to three weeks.

The hospital at Athlone is divided into two distinct halves; one of these halves was appropriated to the treatment of all enteric cases; each flat in the building consists of two large wards and a small ward, the patients were placed in the large wards and the small wards were given over to the special attendants to rest and keep their things in. Orders were issued to these attendants that they were not to remain in the patients' wards after their turn of duty was finished.

Three special orderlies were told off to each flat; they relieved each other at intervals of four hours. Lance-Corporal Green, A.H.C., acted as wardmaster and visited the patients frequently, seeing that their wants were attended to and that they were sponged over when necessary. By this arrangement I managed, with six special orderlies, to have 14 patients thoroughly well looked after night and day, and none of the attendants were over fatigued or contracted the disease.

Owing to care and cleanliness, there was not a single case of bedsore.

On the outbreak being reported to the Deputy Surgeon-General, Dublin District, four men of the A.H.C. were promptly sent to Athlone to assist in nursing the sick.

All evacuations were disinfected, removed, and buried.

In all there were 14 cases amongst the men and 4 children; total, 18. Two cases proved fatal amongst the men, one from perforation, one from pneumonia.

At least half of the cases were of a severe type, four suffered with lung complications, two with severe epistaxis, one with splenic enlargement and anæmia, two with head symptoms, prolonged stupor, low delirium, muscular twitching, great nervous depression.

APPENDIX No. IX.

REPORT OF CASE OF LACERATION OF AORTA, CONSEQUENT ON IMPACTION OF PORTION OF BONE IN THE ŒSOPHAGUS.

By Brigade Surgeon J. WATTS, A.M.D., Chatham.

No. 16,999, Bugler W——, of the Royal Engineers, aged 18 years, was brought to the Station Hospital, Fort Pitt, on the morning of December 21st, 1883. The sick report was marked "Hœmoptysis," he having expectorated that morning about two tablespoonfuls of blood, as I was subsequently informed. Before the sick were brought into the office I was hurriedly summoned to see him in the clerk's office, where I found him lying in a pool of blood, and saw him vomit a considerable quantity of blood. After a short interval he was moved, with every care, to a ward, in an unconscious condition. He partially rallied from the state of collapse about midday. He sucked pieces of ice, took a small quantity of milk, and was given eight grain of pil. plumbi acet. c. opio. About 3 p.m. he again vomited a large quantity of blood, and expired about an hour aftewards. Amongst the clots of blood upon the bed was found a fragment of bone, irregularly quadrangular-flat, with sharp edges. Upon inquiry it was ascertained that four weeks previously he had gone to the medical officer in charge of the Royal Engineers, complaining that he had swallowed a fishbone, and that it was sticking in his throat. On finding that he swallowed bread and water without difficulty, Surgeon Forrester came to the conclusion that the bone had really passed on into the stomach, and that there only remained the soreness caused by the bone on its passage downwards. He therefore sent the man to his duty, cautioning him to report himself again if he had any further difficulty. He did not again report sick until the day of his admission to the Station Hospital, but he told his comrades that he was unable to eat anything but soft food, such as mashed potatoes, &c.

The fragment of bone evidently did not belong to a fish, and Surgeon Forrester probably misunderstood the man on this point.

Upon post-mortem examination the lungs, heart, liver, spleen, and kidneys were found to be normal. The stomach and intestines contained a quantity of blood. In the œsophagus, about 4 inches from the pharynx, there was a deep ulcerated slit or sulcus, which communicated, by a very small aperture, with the arch of the aorta, just below the origin of the left subsclavian artery. As seen from the interior of the aorta, only a very small aperture was discernible, just admitting the point of an ordinary probe.

APPENDIX No. X.

RUPTURE OF TORCULAR HEROPHILI.

Case of No. 36,137, Gunner ———————, 4/1 R.A.
Age, 25; service, one year.

By Surgeon Major H. COMERFORD, A.M.D.

On the night of the 22nd December 1883 he was proceeding home from Gravesend to Coalhouse Fort in company with another man, and when inside the fort he slipped from the edge of the path and fell on the back of his head on the edge of one of the square projections on a shell which lay close to the path, and two witnesses, who accompanied him, stated at the coroner's inquest that he never spoke after the fall, and appeared to be dead when they lifted him up. The body was conveyed to New Tavern Fort Hospital, and a post-mortem examination performed by me at 10 a.m., 24th instant.

Post-mortem Examination.

There was a small triangular wound of scalp a little below and to the left of great protuberance of the occipital bone; this reached down to the bone; there was no fracture of the skull, and on opening latter about three ounces of dark fluid venous blood escaped from back of skull; and on examining the vessels at the back, the torcular herophili was found ruptured, and the tissues of laminæ of falx and tentorium around it infiltrated for about half an inch with dark blood, and a small rent existed on right side of torcular herophili.

APPENDIX No. XI.

INTESTINAL OBSTRUCTION.

ABSTRACT OF THE CASE OF No. 1,375, PRIVATE J—— M——, 1ST BATTALION THE LEINSTER REGIMENT.

By Surgeon-Major S. E. MAUNSELL, A.M.D., Solon, Bengal.

Admitted to Hospital July 13th, 1883. Died 14th July 1883. Age 24 years. Total Service, 5 years and 8 months.

No admission to hospital since May 1882, since which time he has had good health. On the afternoon of the 12th July 1883 he walked to hospital from his barrack hut, and complained of pain in the stomach, which he described as colic; he then received a dose of castor oil guarded by tincture of opium; in two hours he returned, saying the medicine had had no effect; he then received an enema containing castor oil and turpentine, after which he felt much relieved. During the night he was seized with severe pain in the stomach and vomiting; at 6 o'clock the following morning, July 13th, his symptoms were as follows:—Pain at the umbilical region, abdomen full, there was no general feeling of pain, nor could a tumour be felt. He was very depressed, his eyes were sunk, his pulse very quick and weak, and he vomited dark-brown odourless fluid, containing a large quantity of dark sediment like coffee grounds, or such as is seen in the altered blood of hæmatemesis; this was brought up without effort on his part, any article of food or medicine taken being ejected shortly afterwards. His features were sharp, his eyes sunk and suffused looking, pupils contracted, sclerotic greatly congested, pulse very small and weak, 156 per minute, respirations 36, thoracic, the heart labouring, temperature in the rectum 99°, pain still localised at the umbilicus, considerable distension of the abdomen.

Believing the case to be one of acute obstruction of the bowels, the longest available flexible tube was carefully passed up by the rectum to its utmost limit, and a large enema was gently delivered; large hot fomentations and hot applications were assiduously applied over the abdomen, and morphia was administered hypodermically, commencing with ¼ grain, and this was repeated when required to meet the urgency of the symptoms; essence of beef in small quantities and milk were given alternately at frequent intervals; it was also necessary to administer weak brandy and water in small doses during the day owing to the depression. During the middle of the day and the afternoon the above treatment was continued. He had two calls to stool during the day, and passed a small quantity of greyish alkaline liquid without straining, and also passed his urine naturally.

At 6 p.m. his temperature was 100·4°, pulse quick and very weak, difficult to count, respiration also quick and weak, his eyes sunken and congested, had a filmy look, pupils contracted, the countenance and skin of neck cyanosed, the vomiting still continued at intervals and of the same character, the pain in the abdomen was moderate and quite localised about the umbilicus, the abdominal distension was no greater than in the morning. Hypodermic injections of morphia, hot applications to the abdomen, small quantities of brandy and water were administered at regular intervals through the night, with essence of beef and milk in small quantities frequently repeated. He dozed occasionally under the influence of morphia, but had occasional sharp exacerbations of pain of a twisting character in the abdomen, and at times became very restless, kicking off the clothes. During the night the vomiting, which had consisted of dark-brown sedimentous and odourless liquid, became lighter in colour, smaller in quantity, less frequent, and more of a thin bilious nature, quite free from black sediment; milk drunk was returned soonafterwards,

the caseine having become quite coagulated under the acidity of the contents of the stomach; the coagula stained a deep yellow by bile regurgitated from the canal into the stomach. He felt himself greatly relieved after each ejection of fluid from the stomach.

At 6 a.m., 14th July, a bilious looking thin watery discharge passed frequently and involuntarily by the rectum, for which it was necessary to place a draw sheet and waterproof underneath him. His faculties were quite clear, and he conversed freely about his symptoms and his expected return home next January; he had, however, a very depressed look, dark livid round the eyes, the cyanotic appearance had extended more over the trunk, his legs and feet, hands and arms were cold and clammy, the skin of the fingers presenting a shrivelled appearance, while the temperature of the trunk as taken in the rectrum was 104·2°. The urine drawn off from his bladder was of the normal colour, specific gravity 1012°, showing a quantity of bile pigment when the test was applied, a small quantity of lithates and free from albumen. The pulse was barely perceptible at the wrist, the heart acting very quickly and weakly, the lungs congested, the abdominal distension much increased, the pain greater, dull in character, and still almost entirely limited to the umbilical region; liquid food administered in small quantities was soon regurgitated from the stomach, vomiting recurring frequently and causelessly, and now for the first time he complained of the "horribly nasty stuff" that he brought up. It was quite free from any fœculent odour.

During the course of the morning he experienced sudden paroxysms of pain in the abdomen, first in the left side, then shooting to the right, then to the umbilicus; the abdomen became more distended, the surface of the body irregularly heated, the temperature in the rectum continuing 104°, the cyanosed state extended over the trunk generally, and less so over the extremities; so much so, that the weight of the hand resting upon the thorax left behind it a white impression, that of the outspread fingers being dove-tailed with livid red stripes, the white imprint strangely contrasting with the dark redness of the body generally.

The depression increased, the heart's action became weaker, the respiration more shallow; it became evident that the heart, lungs, and circulation generally were engorged by thick unäerated blood, approaching to a state of asphyxia. About 9.30 a.m. he experienced a sudden paroxysm of acute pain in the abdomen, soon after which the heart's action failed and he died about 10 a.m.

He was quite conscious up to a short time before his death.

Post-mortem appearances 18 *hours after death.*

Rigormortis only slightly developed, the body of a dark livid colour, livid mottling about the arms and legs.

Head.—Not examined.

Thorax.—On cutting the tissues, dark thick blood oozed from every venous trunk and ramification. The thoracic cavity was diminished one third owing to the pressure upwards against the diaphragm by the inflated intestines, together with the stomach and its contents of dark brown and semi-bilious fluid.

Heart.—Was of normal size, its muscular structure and valves healthy, there was a thick solid, fibrinous, decolorized clot found in the left ventricle and left auricle of which it formed almost a cast. The great veins of the thorax and neck were distended with dark thick blood, the aorta and its lining membrane healthy.

Lungs.—Structure healthy, but intensely engorged with dark thick blood, bleeding freely on section; the costal and pulmonary pleura bound together by old firm adhesions, especially on the right side.

Abdomen.—The abdominal muscles were greatly congested, the smaller veins dilated with thick dark blood, the peritoneal lining very much injected. The intestines generally were inflated, of a very dark and congested appearance; the

Stomach full of a dark sedimentous fluid; distended, pressing up against the diaphragm, its external coats greatly congested, the peritoneal covering peeling off readily, the lining membrane normal; the

Duodenum, externally stained, of a dark colour; probably from post-mortem changes, but otherwise healthy; the

Jejunum, similarly stained, but of normal structure and calibre, except at its lower end where it merged into the ileum; it was soft in structure, containing a few white scybalæ, several of the folds being obliterated; the

Ileum, which, in the normal state, is narrower and less vascular than the jejunum, was greatly dilated through its whole extent down to the cœcum, where it formed a large pyriform pouch occupying the entire right iliac fossa, and equally as large as the distended stomach; the serous coat peeled off easily, the muscular, cellular, and mucous coats being all so soft and stretched that they broke down readily under manipulation. The external coats dark coloured or dark green partly from *post-mortem* changes.

On its inner surface there was no trace of epithelium, valvulæ conniventes, or follicles, the villi and the capillary network generally being greatly congested, and when held to the light the general congestion and injection of the fine vessels was very clear through the stretched and diaphanous membranes; the sac formed by the lower end of the distended ileum contained a large quantity of thick dark liquid material, corresponding with what had been vomited during life, and to that which filled the stomach cavity. At the ileo-cœcal valve were found 14 full sized, rough, sharp edged plum stones, which had been impacted there, thus causing the obstruction and the enteritis.

On carrying the section down through the valve and into the colon, there was a thickening and marked congestion of the mucous coats in this part of intestine; the

Cæcum was comparatively small compared with the dilated cœcal end of the ileum, the vermiform appendix empty and of normal size; the

Colon, congested at its commencement, and stained externally dark or dark greenish, otherwise of normal structure and healthy throughout the remainder of its extent.

Liver, healthy, weighing 3 lbs. 6 oz., congested, the veins full of thick dark blood.

Spleen, congested, weighed 6 oz.

Kidneys, congested. *Right* weighed 5 oz. *Left* weighed 4 oz.

The Portal Vein, and abdominal venous system generally was greatly congested.

Remarks on the foregoing Case.

I may be excused for making comments on the above case on the grounds that the causes of intestinal obstruction are so various, its diagnosis generally so obscure, its treatment so uncertain, and so often unsuccessful.

In this instance the symptoms were most acute early in their attack, sudden in their nature, and in result rapidly fatal; and though I quickly formed the opinion that the case was one of acute intestinal obstruction, and lost no time in putting the treatment for that affection into practice, yet I think that a person who is suddenly confronted by a case of this nature may not unnaturally find himself at first a little perplexed as to the proper course to adopt.

The veil of obscurity which of necessity covers an affection situated in a long tract of intestine hidden from view, not only as to the nature of the lesion, but as to its exact site, add to the difficulty already caused by the urgency of the symptoms. There are in addition circumstances under which similar and sometimes equally grave symptoms may arise, and though some of these may be eliminated as improbable, yet they all keep crowding into the mind's eye, as it were, probably adding to the embarrassment.

The congested-looking, sunken, filmy, half-closed eyes, sharp cyanosed features and face, and the extremely weak pulse, reminded me of cases I had seen in the cholera epidemic of 1861 at Meean Meer in men who having passed the algide stage and escaped asphyxiation from thick venous blood and were progressing into the later stage of secondary fever.

In malignant disease of the stomach, in acute hæmatemesis, as in cases of rupture of over filled vessels or serious impediment to the circulation of blood in the liver, altered blood and alimentary matters may be thrown up in quantities accompanied by symptoms of collapse.

In severe cases, remittent fever may be accompanied by the algide symptoms, failing pulse, vomiting of bilious matter or altered blood, and epigastric pain, as in this case; such cases are not unknown in the Punjab.

More than anything else, the ejected fluid resembled that of the second stage of "specific" yellow fever, when the white acid discharge has been succeeded by the well-known "black vomit," with its sediment of "snuff-like" specks, cold, damp skin, pulse so small as to be almost extinct at the wrist, intelligence being yet clear and unclouded.

The extreme and general state of cyanosis which came on during the course of this brief illness, and was so very marked for some hours before death, partly arising from the rapid formation of large fibrinous clots in the cardiac cavities which, preventing the action of the heart, and offering such obstruction to the circulation, not only cardiac but pulmonic, that aëration of the blood became impossible, the arterial blood retaining throughout its course the properties of venous—was more suggestive of what is seen in an open state of the "ductus arteriosus" or "foramen ovale," or in cases of some serious affection of the heart or great vessels, and except under such circumstances is, I fancy, seldom witnessed.

A tumour could not be felt at any time in the abdominal cavity, the localised umbilical pain, as well as the tension of the abdominal parietes held throughout a position of secondary importance in point of urgency, to those of the general depression, and the vomiting of dark fluid, and were out of all proportion to the extent of the intestinal disease as discovered post-mortem, as well as to the nature of the obstruction.

In acute obstruction of the bowels, speaking generally, the vomited matter is said to commence with a thin bilious fluid, assuming by degrees a greenish hue, afterwards dark brown, and finally assuming the character and odour of a mixture of fœces and water; that is to say, "stercoraceous" vomiting. But in this case the above phenomena were reversed, and at no time could the term "stercoraceous" be applied to it, although scybalæ were found after death in the small intestine, and the ejected fluid was precisely the same as that found in large quantities in the distended ileum.

Before arriving at a diagnosis in a suspected or doubtful case of this sort or deciding upon a line of treatment, it is necessary to consider the causes which are liable to produce acute intestinal obstruction, as well as the probable seat of the lesion or foreign body.

For the sake of convenience it may be remembered that certain causes are more likely to be present, and certain syptoms are more likely to predominate under the circumstances of age:—as those most likely to occur in "youth," in "middle age," and in "advanced life,"—or they may be divided into a more practical but wider classification, "acute and chronic."

In the Association Medical Journal, 1853, Mr. Hinton, of London, in 135 cases of obstruction, tabulates the causes irrespective of age:—

By bands and adherent diverticula	36
By stricture	33
Intussusception	24
Peritoneal adhesions	9
Hernias	8
Foreign bodies	7
Twists of sigmoid flexure	4
Fœcal accumulations	3

the remaining 11 being made up of doubtful cases and cancer.

Of the above causes those which are most likely to be accompanied by acute symptoms are intussusception and foreign bodies. As regards intussusception Dr. Wilks, of London, says it is rare in the adult, he himself only saw one case. During 15 years' transactions of the Pathological Society of London, 15 only are noted; no two of which occurred in the individual experience of any one man.

Professor Aitken never made a post-mortem of such a case and never saw one in adult (*Vide* Aitken, Vol. II., 6th edition), while on the contrary amongst children it is not at all uncommon.

"Rilliet" collected 25 cases, all of which occurred under 15 years of age.

Therefore in a young adult previously healthy, the probability of an acute intestinal obstruction having been caused by a foreign body might be first discussed.

As regards the nature and seat of the obstruction, a certain amount of information may be obtained also from the symptoms; for instance, in

invagination, provided the orifice of the invaginated part lies in the general axis of the passage, a certain amount of fœcal matter may continue to pass in small quantities for some time, whilst the pathological process is in progress:—in contradistinction to the sudden obstruction caused by strangulation or foreign bodies:—again the lower the seat of the obstruction the greater the tympanites, the tenesmus, and probably hœmorrhage from the bowels, more especially if it is a case of invagination:—on the contrary the higher the seat, the more severe and frequent the vomiting, the earlier and more urgent the umbilical pain. However, whatever the cause may be, the symptoms are often so similar, that a correct diagnosis of the nature of the exact seat, is not to be expected.

Mr. Pollock, of St. George's Hospital in London, in an essay on the subject, mentions the case of a female who suffered from obstruction of the bowels; in this case there was sufficient time to operate, an artifical anus was made, from which a mass was ejected containing five plum stones firmly agglutinated together, which were followed afterwards by two small bones and more plum stones to the total number of 116. He says that bodies of this nature, including bullets, pebbles, calculi are generally the least dangerous in their effects, and that they are most likely to be obstructed in their progress at the ileo-cœcal valve.

As regards treatment, the injection of large quantities of water or air, for the purpose of distending the bowel with a view to reduce an invagination or to remove a foreign body is liable to act very injuriously, as there is a certain degree more or less of enteritis, under which circumstances of course distension of the bowel is very hazardous. Without referring to cases requiring operative measures, or to those which like the one under review, are of a very acute and fatal nature; as a rule it may be said that if rest in every way is rigidly enforced, the liability to inflammation combated by opium alone, or in combination with belladonna, fomentations, &c., giving the patient nourishment in suitable form, and in suitable quantities, cases of obstruction under ordinary circumstance tend to recovery.

APPENDIX No. XII.

A CASE OF POISONING BY IODOFORM.

By Deputy Surgeon-General J. R. M. Lewis, h.p.

Lance-Corporal T. F., 1st Battalion East Surrey Regiment, aged 23 years, service $2\frac{5}{12}$ years, was invalided from Gibraltar in February 1883, in consequence of fistula in ano, and joined the depôt of his regiment at Kingston-on-Thames, from Netley Hospital, the following June.

On the 16th of October of the same year, he having only recently been promoted lance-corporal, was placed in arrest for drunkenness, which annoyed him so much, being of a sulky, determined disposition, that about half-past two o'clock on the day of his arrest he poured the contents of a bottle (which he had had in his possession for some considerable time) labelled "Iodoform," "Poison," amounting to considerably over a drachm, as I afterwards ascertained, on to the table in his barrack-room, rubbed it up, then mixed it with water in a basin, and drank it off, throwing the basin and bottle out of the window. He immediately vomited and then became insensible.

At about 3.30 p.m. the hospital sergeant was sent for, and found the man in a state of unconsciousness, and unable to swallow the mustard emetic which he attempted to administer to him. I saw the man about a quarter of an hour afterwards. He was then in a state of profound coma, face flushed, eyelids only partially closed, eyes suffused, pupils dilated, and insensible to light, conjunctivæ insensible to the touch, there was some frothing at the mouth, the pulse was about 100, and full, the respirations were about 24, and his skin was warm. On using the stomach pump, the stomach was found to be empty, and I, therefore, injected a thin decoction of starch, which, on being drawn off, had very strongly the characteristic odour and colour of the poison, and I consequently repeated the operation. About a pint and a half of urine was drawn off by the catheter, cold was applied to the head, flapping with wet towels, and other means of rousing him were had recourse to, but without the slightest effect. Injections of strong coffee were administered by the rectum. He remained with little or no change in any of the above symptoms during the night, the coma being so deep that he remained motionless in any position in which he was placed. On being sharply roused at about 9 o'clock on the following morning he, for the first time, showed some signs of returning consciousness by attempting to articulate, but immediately relapsed again into a state of stupor, and showed a complete condition of indifference to the flicking of wet towels, pinching, &c., to which he was subjected at intervals for some few hours. The pulse and respiration were at this time becoming more normal, the pupils, although sluggish, were less dilated, and the eyelids were capable of being completely closed.

The face was assuming its natural complexion, but its expression was dull and lethargic. In the afternoon he gradually became capable of being more easily roused, and by the evening could answer questions drowsily, but on being left alone at once dropped off to sleep, and it was not until the third day that he became free from drowsiness. He complained of headache on recovering, and there was complete loss of appetite for a few days, but in less than a week from the date of his having taken the poison he appeared to be quite free from any ill effects.

The case is of interest, inasmuch as I believe it to be the only one on record where iodoform has been taken with a suicidal intent, and also from the fact of the man's recovery after having taken such a large quantity of the drug.

APPENDIX No. XIII.

LIST OF OPERATIONS PERFORMED AT THE ROYAL VICTORIA HOSPITAL, NETLEY, DURING THE YEAR 1882, WITH SHORT ABSTRACTS OF THE MORE IMPORTANT CASES.

By Surgeon-Major R. F. Tobin, A.M.D., Assistant Professor of Military Surgery.

Operations.	Number of Cases.	Diseases.	Results. Successful.	Otherwise.	In Hospital.	Died.	Remarks.
Amputations.							
Thigh	2	1. Sarcoma knee	—	—	—	—	
		1. Gun shot wound, knee.	1	—	—	1	See Cases Nos. 1 and 2.
Leg	1	Painful stump	1	—	—	—	See Case No. 3.
Fingers	4	Anchylosis	4	—	—	—	
Toes	1	Gangrene	1	—	—	—	
Excisions.							
Hip Joint	1	Gun-shot wound	—	—	—	1	See Case No. 4.
Shoulder Joint	1	Gun-shot wound	1	—	—	—	See Case No. 5.
Genito-Urinary Organs.							
Internal urethrotomy	6	Stricture urethra	6	—	—	—	
Circumcision	1	Phimosis	1	—	—	—	
Tunica vaginalis (tapped and injd.)	1	Hydrocele	1	—	—	—	
Intestines.							
Application of Smith's clamp and cautery.	5	Hæmorrhoids	5	—	—	—	
Division of sphincter ani	1	Fistula in ano	1	—	—	—	
Eye.							
Division, internal rectus	3	Strabismus	3	—	—	—	
Tumours.							
Tumours (removal of)	3	Various tumours	3	—	—	—	
Sequestra (removal of)	8	Necrosis	8	—	—	—	
Bullets (extracted)	5	Gun-shot wound	5	—	—	—	
Tracheotomy	1	Paralysis of vocal cords	1	—	—	—	See Case No. 6.
Hip joint incised and healed aseptically.	1	Morbus coxæ	1	—	—	—	

Case No. 1.

Sergeant C.B. Age 28 years. Service 9 years. Family history: maternal grandfather suffered from cancer. Previous medical history: good. No history or indication of syphilis. The disease (sarcoma of tibia and fibula) which rendered necessary the removal of this man's leg first appeared in June 1881, as a small hard tumour situated a few inches below the tubercle of the tibia, and adherent to that bone. He had received a severe kick in this locality 18 months before. The disease advanced rapidly, and as the man refused to have his leg removed in India he was sent home, and arrived at Netley 4th May 1882. At this date a nodulated tumor, superficially ulcerated at some parts, and at others perforated with deep sinuses, occupied the anterior and outer aspect of the left knee, involved the neighbouring parts for some 4 inches above

and 8 inches below the joint, and caused it to measure 24 inches in circumference, or double its ordinary size. The tumour was not painful when the patient was in a suitable position, *i.e.*, when he was sitting in an arm chair with the diseased leg semi-flexed and lying on its outer side on a rest in front of him. For 6 months he had maintained this position and never lain down. Both legs were very œdematous; glands of groin apparently not affected. It is needless to say that his general health had suffered, and that he was in a very low and cachectic condition. On 8th May amputation, with long anterior and short posterior flaps cut by incision, was performed through the middle of femur. During the operation and subsequent dressings (four in all) strict Listerism was adhered to. The stump healed very quickly. On the 17th May, or ninth day after operation, only the points where the drainage tubes had been inserted remained unhealed. The improvement in his general health was equally rapid and satisfactory, and he left hospital a robust man, able to walk well on the artificial limb supplied to him.

Case No. 2.

Private J. S. Age 24. Service 3 years. Was wounded at the battle of Kassassin by a bullet which fractured the left tibia and fibula close to the knee, and opened that joint. An attempt had been made to save the limb, but when the patient arrived at Netley 26th September, all hope of doing so had to be abandoned as the patient was suffering from pyæmia, and was sinking rapidly. On 27th September, the day after arrival, the leg was amputated at the junction of the lower and middle third of femur. Although the patient seemed to rally somewhat after the operation, the symptoms of pyæmia never abated, and he died on 6th October 1882.

Case No. 3.

Private P. R. Age 39. Service 17 years. Arrived at Netley 17th October 1881, having had his right foot amputated in South Africa at the ankle for a gun-shot wound received at Amayuba. The stump was painful, and became ulcerated whenever he attempted to use the appliance with which he had been supplied. On 27th February 1882, no improvement having taken place in the condition of the stump, the leg was re-amputated, on this occasion at a point a hand's breadth below the knee. A long anterior and short posterior flap were made. Lister's precautions, and dressings were adopted. The patient made a rapid and complete recovery.

Case No. 4.

Private C. D. Age 20. Service 1 year. Was wounded at Kassassin 28th August 1882. The bullet struck the femur at the lower margin of the great trochanter, and a portion of it penetrated that bone without completely fracturing it, and, passing upwards, lodged. He arrived at Netley 25th September 1882. The wound was then septic. A large quantity of most offensive matter was diffused underneath the fascia lata. All the usual symptons of pyæmia were present. The least movement caused intense pain. For the first fortnight after admission free incisions, drainage, and irrigation with antiseptic fluids were used to try and induce a healthy action in the injured parts. These having failed to do so, and the patient continuing to lose ground, it was decided to remove the head of the femur, first, because this operation appeared to afford the only chance of recovery, secondly, because it would probably in any case diminish the patient's sufferings, which were intense when anything caused the least movement of the injured joint. The operation was performed on the 15th October. The femur was divided immediately below the great trochanter. The patient bore the operation fairly well. It had the effect of diminishing his sufferings, and in consequence of the free drainage which it allowed the discharge became of a healthy character, but the patient's strength was insufficient for the long process of repair, and he died on the 30th October 1882.

Case No. 5.

Private J. S. Age 23. Service $4\frac{6}{12}$ years. Was wounded at Tel-el-Kebir on 13th September 1882 by a bullet which entered just above the fold of the left axilla, passed forwards, grooving the humerus in its course, and escaped just

underneath the coracoid process. He arrived at Netley 3rd October 1882. As the joint was open and suppurating, and the head of the humerus injured, it was decided to remove the injured part. This was done on the 12th October by a straight incision over anterior aspect of joint. It was necessary to divide the bone through the surgical neck, all above being involved in the injury. A free opening for drainage was made posteriorly. The patient recovered rapidly without any complications, and left hospital 29th January 1883 with a useful arm.

Case No. 6.

Sapper R. McK., R.E. Age 22. Service 2 years. Invalided from Egypt for sunstroke contracted on active service, and while under treatment in the Medical Division, was on 15th October 1882 attacked with dyspnœa, due probably to paralysis of some muscle or muscles of the larynx. As the patient was in danger of suffocation tracheotomy was performed. The operation was successful, and the patient regained his strength, but the condition which rendered the operation necessary remained, and every attempt to leave off wearing the tube was accompanied by a return of dangerous dyspnœa.

R. F. Tobin,
Surgeon-Major, A.M.D.

Netley,
18th October 1883.

APPENDIX No. XIV.

APPENDIX

Annual Abstract of Meteorological Observations taken

NETLEY. Lat. 50° 51′ N.

Month.	Mean Pressure.	Air Temperature.							Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.			Per Cent.	Minimum.	
			Min.	Max.	Temp.	Day.	Temp.	Day.		Mean.	Per Cent.	Day.
January	30·321	44·0	36·2	47·7	21·4	24th	54·2	5th	·229	86·4	71·6	14th
February	30·201	45·0	36·5	52·5	25·9	4th	59·1	12th	·261	84·1	66·0	19th
March	30·020	47·0	38·2	55·9	29·2	4th	68·4	13th	·259	82·3	62·8	22nd
April	29·717	51·0	42·1	59·1	34·2	9th	65·2	7th	·310	78·8	55·6	27th
May	29·982	56·0	44·1	65·2	35·2	15th	74·8	30th	·373	78·6	59·8	20th
June	29·805	59·0	49·3	67·1	39·2	17th	72·2	29th	·398	78·6	60·6	7th
July	29·827	62·0	52·9	68·6	44·8	2nd	78·0	30th	·482	82·0	50·0	31st
August	29·902	62·0	52·8	70·7	47·0	12th	82·9	6th	·499	81·7	59·8	24th
September	29·814	56·0	46·9	66·9	36·0	15th	73·2	10th	·437	84·0	71·0	15th
October	29·763	53·0	43·9	59·5	31·0	30th	71·0	1st	·371	84·0	70·0	3rd
November	29·679	46·0	38·8	51·3	22·0	18th	59·0	1st	·270	84·0	72·0	18th
December	29·617	44·0	36·2	46·2	17·8	11th	54·2	27th	·266	90·0	43·0	11th
Mean	29·809	53·0	43·1	59·2	32·2	—	67·6	—	·346	82·8	61·8	—

GIBRALTAR. Lat. 36° 6′ N.

Month.	Mean Pressure.	Air Temperature.							Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.			Per Cent.	Minimum.	
			Min.	Max.	Temp.	Day.	Temp.	Day.		Mean.	Per Cent.	Day.
January	30·352	56·0	51·0	60·6	45·0	9th	66·7	8th	·401	85·9	77·2	20th
February	30·359	57·0	51·2	62·1	48·0	13th	67·5	28th	·417	84·9	75·6	15th
March	30·244	60·0	50·8	65·7	46·2	27th	70·0	7th	·430	82·6	72·0	31st
April	30·084	64·0	54·1	71·5	49·0	3rd	79·0	29th	·492	77·5	69·0	28th
May	30·029	67·0	58·7	71·8	51·5	3rd	80·5	26th	·535	83·5	70·8	26th
June	30·074	71·0	63·6	80·2	59·0	10th	89·0	10th	·651	79·1	54·8	10th
July	30·040	76·0	65·9	81·6	61·0	11th	86·4	12th	·700	79·5	69·8	11th
August	30·056	76·6	67·0	83·10	62·7	20th	89·0	13th	·757	81·0	65·0	24th
September	30·056	72·0	61·9	77·5	56·4	21st	93·7	3rd	·616	81·0	66·0	10th
October	30·040	68·0	59·1	79·5	52·0	30th	81·0	2nd	·557	84·0	65·0	2nd
November	30·220	62·0	54·0	69·3	48·3	30th	75·5	10th	·447	88·0	73·0	9th
December	29·664	57·0	50·1	63·7	44·0	10th	73·8	30th	·425	99·0	81·0	22nd
Mean	30·102	65·5	57·3	72·2	51·9	—	79·3	—	·534	83·8	69·9	—

SCUTARI CEMETERY. Lat. 41° N.

Month.	Mean Pressure.	Air Temperature.							Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.			Per Cent.	Minimum.	
			Min.	Max.	Temp.	Day.	Temp.	Day.		Mean.	Per Cent.	Day.
January	30·332	54·0	33·7	45·4	27·0	13th	53·8	7th	·211	84·8	68·8	8th
February	30·219	52·0	29·8	45·6	17·6	9th	59·0	27th	·180	78·0	62·0	27th
March	30·076	57·0	38·6	58·1	31·2	10th	66·2	3rd	·256	73·0	47·4	19th
April	29·873	60·0	42·6	62·4	29·0	7th	77·0	28th	·284	70·6	54·2	19th
May	29·923	65·0	49·7	74·3	39·6	13th	84·8	30th	·393	71·0	53·6	15th
June	29·930	69·0	55·5	80·9	44·0	4th	94·4	12th	·472	64·2	45·2	6th
July	29·771	77·4	65·2	92·9	56·4	6th	101·2	27th	·564	53·6	43·0	9th
August	29·831	77·1	63·7	89·5	59·0	9th	97·6	18th	·584	57·5	41·2	7th
September	29·933	73·9	60·7	85·9	52·8	30th	92·2	28th	·402	56·2	36·2	22nd
October	30·030	66·0	49·5	68·0	41·6	25th	75·6	13th	·378	75·5	59·2	14th
November	29·971	61·7	46·7	62·1	38·2	13th	68·4	17th	·334	77·2	59·6	18th
December	29·990	57·2	42·3	54·9	30·4	3rd	63·8	2nd	·282	78·3	57·0	6th
Mean	29·990	64·1	49·1	68·3	38·9	—	77·8	—	·369	69·9	53·2	—

No. XIV.

at Netley and Foreign Stations in the Year 1882.

Long. 1° 20′ W. Height of Barometer Cistern above Sea, 47 feet.

Mean Amount of Cloud.	Rainfall.			Weather.								Wind.								
				Number of Days of								Number of Observations under each Point.								
	Total.	Max.	Day.	Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
8·6	1·33	0·38	2nd	11	—	—	—	2	1·5	24·5	—	0·5	4·0	2·0	9·0	1·0	9·5	2·0	2·0	1·0
7·0	1·43	0·50	28th	11	—	—	—	—	2·5	16·5	—	—	1·0	2·5	9·5	0·5	7·0	3·0	4·0	0·5
7·2	0·68	0·20	25th	13	—	—	1	—	1·0	14·0	—	—	2·5	3·0	1·5	1·0	11·0	7·0	5·0	—
7·6	3·60	0·68	12th	20	—	1	1	—	—	16·5	2	1·5	4·0	5·0	3·5	1·0	10·5	2·5	2·0	—
6·9	2·11	0·55	5th	11	—	—	1	1	2·0	15·5	—	2·0	5·5	1·5	6·5	0·0	12·0	2·5	1·0	—
7·9	2·69	0·39	22nd	17	—	1	—	—	—	19·5	—	—	2·0	1·0	1·0	1·0	13·5	5·0	6·5	—
7·5	2·56	0·41	17th	18	—	—	1	—	2·5	17·0	1	0·5	1·0	—	1·0	1·0	22·5	1·5	3·5	—
5·6	2·07	0·42	31st	19	—	—	1	—	4·5	9·0	2	0·5	1·5	0·5	2·0	1·0	9·0	3·0	13·5	—
6·0	2·31	0·74	28th	13	—	—	—	—	7·0	11·0	1	2·5	9·5	1·0	2·0	1·0	5·5	2·0	6·5	—
7·6	6·22	1·38	15th	20	—	—	—	—	3·5	20·5	4	3·0	7·0	3·0	3·5	2·5	8·0	3·0	1·0	—
8·0	3·27	0·61	12th	20	—	—	—	—	6·0	19·5	1	3·5	2·0	0·5	1·0	0·5	8·5	9·5	4·5	—
8·5	2·75	·89	25th	19	1	—	—	3·0	3·5	26·	—	2·5	3·0	1·0	6·5	0·5	8·5	4·0	5·0	—
7·3	2·58	·55	—	16	·08	·16	·41	·5	2·8	17·4	·9	1·3	3·5	1·7	3·9	·9	10·4	3·7	4·5	·1

Long. 5° 20′ W. Height of Barometer Cistern above Sea, 53 feet.

6·5	2·49	1·30	24th	6	—	—	—	—	6·0	17·0	—	—	3·5	23·0	0·5	—	0·5	1·0	2·5	—
5·3	0·89	·34	13th	9	—	—	—	—	5·0	5·0	—	·5	11·5	9·0	0·5	0·5	1·0	4·0	0·5	0·5
4·0	1·48	·43	21st	6	—	—	—	—	15·5	5·0	—	—	4·5	14·0	1·0	—	2·5	7·0	2·0	—
3·1	0·69	·26	15th	5	—	—	—	—	17·5	3·0	—	—	2·0	2·0	0·5	—	11·0	12·5	2·0	—
4·6	2·38	·42	19th	15	—	—	—	—	11·0	8·5	—	—	2·5	7·0	1·0	0·5	7·0	11·5	1·5	—
2·5	0·02	·02	15th	1	—	—	—	9·0	19·5	1·5	—	—	8·0	7·5	—	—	3·5	10·0	1·0	—
3·0	—	—	—	—	—	—	—	—	19·0	3·0	—	—	4·5	10·5	—	—	2·5	9·0	4·0	0·5
2·0	—	—	—	—	—	—	—	—	24·0	0·5	—	—	3·5	9·0	1·0	—	2·5	8·5	6·0	0·5
2·5	0·10	·08	7th	—	—	—	—	—	20·0	4·5	—	—	0·5	5·0	—	—	1·0	10·5	13·0	—
4·0	0·66	·46	26th	2	—	—	—	—	15·5	5·5	—	—	6·0	9·0	—	—	1·0	4·5	10·5	—
2·0	0·02	·02	6th	1	—	—	—	3·5	21·5	4·0	—	—	3·0	5·0	1·0	—	0·5	7·0	13·5	—
4·38	9·43	2·80	10th	15	—	—	—	—	14·5	11·5	—	—	3·5	1·5	2·5	—	7·0	10·0	6·5	—
3·6	1·51	·51	—	5	—	—	—	1·04	15·7	5·7	—	·04	4·4	8·6	·66	·08	3·3	7·9	5·2	·12

Long. 29° 3′ E. Height of Barometer Cistern above Sea, 60 feet.

7·5	3·16	0·43	8th	17	8	3	—	—	6·0	22·5	—	9·5	9·5	2·0	0·5	4·5	2·0	—	1·0	2·0
6·1	3·06	0·86	1st	14	12	—	—	—	9·0	13·0	2·0	6·5	4·0	1·5	—	2·5	6·0	2·0	1·0	4·5
5·0	0·31	0·07	1st	3	—	—	—	—	13·5	10·0	—	5·5	7·5	2·5	—	4·5	6·5	0·5	0·5	3·5
5·9	1·20	0·48	11th	7	1	1	—	—	9·5	12·5	—	2·5	11·5	3·0	0·5	4·0	5·5	1·5	—	1·5
4·9	1·04	0·30	12th	10	—	—	4·0	—	18·0	10·5	—	8·0	9·5	2·0	—	5·5	2·5	1·0	—	2·5
3·2	2·13	1·20	18th	9	—	—	2·0	—	19·5	6·0	—	8·0	5·0	1·0	—	6·5	7·0	1·0	0·5	1·0
2·1	0·03	0·01	11th	3	—	—	2·0	1·0	23·0	2·0	—	5·0	13·0	—	—	6·0	4·5	—	1·5	1·0
2·9	2·06	1·69	4th	5	—	—	1·0	2·0	21·0	1·5	—	6·5	15·5	3·0	—	2·0	2·5	0·5	—	1·0
3·9	0·24	·21	30th	2	—	—	2·0	—	12·5	3·5	—	—	20·0	1·0	0·5	2·0	3·5	—	—	3·0
5·6	1·31	·41	1st	10	—	—	—	—	9·0	9·5	—	1·5	8·0	1·0	1·0	1·5	5·5	—	3·0	9·5
5·2	3·63	1·05	10th	12	—	1	—	1·0	12·0	11·5	—	3·5	3·0	3·0	1·0	4·0	11·5	1·5	0·5	2·0
7·0	2·38	·90	1st	16	1	1	2	1·0	5·0	18·0	1·0	3·5	6·5	5·0	2·5	4·5	6·0	1·5	0·5	1·0
4·9	1·70	·63	—	9	1·8	0·5	1·08	0·4	13·5	10·04	·25	5·0	9·4	2·08	0·5	3·9	5·5	·7	·7	2·7

Appendix

Annual Abstract of Meteorological Observations taken

NICOSIA, CYPRUS. Lat. 35° 10′ 50″ N.

Month.	Mean Pressure.	Air Temperature. Mean, 9 a.m.	Means of Min.	Means of Max.	Abs. Min. Temp.	Abs. Min. Day.	Abs. Max. Temp.	Abs. Max. Day.	Tension of Vapour.	Relative Humidity. Per Cent. Mean.	Minimum. Per Cent.	Minimum. Day.
January	—	—	37·1	59·2	30·0	23rd	68·3	2nd	·242	74·8	52·2	28th
February	—	—	34·8	57·7	24·8	12th	69·5	28th	·229	72·7	56·8	20th
March	—	—	42·9	71·6	38·2	3rd	77·7	8th	·303	59·5	40·5	25th
April	—	—	48·9	73·5	35·2	8th	83·8	29th	·351	59·0	31·8	26th
May	—	—	52·5	84·4	44·2	2nd	99·8	30th	·378	48·6	33·0	29th
June												
July												
August												
September												
October												
November												
December	—	—	45·3	68·2	39·8	27th	77·3	3rd	·353	80·6	70·0	26th
Mean of 6 months	—	—	43·5	69·1	35·3	—	79·4	—	·309	65·8	47·3	—

* Incomplete.

POLYMEDIA, CYPRUS. Lat. 34° 40′ N.

Month.	Mean Pressure.	Air Temperature. Mean, 9 a.m.	Means of Min.	Means of Max.	Abs. Min. Temp.	Abs. Min. Day.	Abs. Max. Temp.	Abs. Max. Day.	Tension of Vapour.	Relative Humidity. Per Cent. Mean.	Minimum. Per Cent.	Minimum. Day.
January	30·062	51·0	43·5	60·8	34·0	15th	68·2	9th	·273	64·9	51·8	28th
February	29·968	49·0	40·6	57·3	30·0	11th	67·2	21st	·283	71·2	52·0	26th
March	29·924	62·0	50·1	69·7	44·0	16th	77·8	7th	·385	60·4	36·4	24th
April	29·745	64·0	53·0	70·8	47·0	15th	81·2	18th	·427	67·4	42·0	28th
May	29·822	71·1	57·8	79·0	51·0	24th	90·0	29th	·483	55·0	32·0	29th
June												
July												
August												
September												
October	29·932	72·5	60·1	82·3	56·0	21st	90·0	14th	·441	48·0	39·0	27th
November	29·651	65·6	56·3	75·2	49·2	21st	85·2	1st	·462	60·0	38·0	7th
December	29·663	57·2	51·3	67·7	40·0	27th	75·4	2nd	·394	71·0	55·0	15th
Mean of 8 months	29·848	61·5	51·5	70·3	43·9	—	79·3	—	·387	62·2	43·2	—

* No returns received.

TROADOS, CYPRUS. Lat. 34° 57′ N.

Month.	Mean Pressure.	Air Temperature. Mean, 9 a.m.	Means of Min.	Means of Max.	Abs. Min. Temp.	Abs. Min. Day.	Abs. Max. Temp.	Abs. Max. Day.	Tension of Vapour.	Relative Humidity. Per Cent. Mean.	Minimum. Per Cent.	Minimum. Day.
January												
February												
March												
April												
May												
June	29·56	63·5	51·9	73·5	33·0	5th	83·6	26th	·356	48·0	31·0	12th
July	29·51	69·5	60·1	80·6	53·0	15th	86·4	3rd	·372	39·0	25·0	6th
August	29·88	66·4	57·6	79·3	50·0	10th	85·0	27th	·362	41·0	25·0	22nd
September	29·63	63·0	58·3	76·2	48·8	6th	81·0	23rd	·350	43·0	29·0	23rd
October												
November												
December												
Mean of 4 months only.	29·64	65·6	56·9	77·4	46·2	—	84·0	—	·360	42·7	27·5	—

* No returns received.

No. XIV.—*continued.*

at Netley and Foreign Stations in the year 1882.

Long. 33° 21′ 15″ E. Height of Barometer Cistern above Sea, 592 feet.

Mean Amount of Cloud.	Rainfall.			Weather.							Wind.								
				Number of Days of							Number of Observations under each Point.								
	Total.	Maximum.	Day.	Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
3·8	2·38	1·40	4th	6	—	1	1	—	17·0	5·5	—	—	4·0	11·5	—	4·5	1·5	6·5	0·5	2·5
5·0	1·17	0·51	23rd	11	2	—	—	—	8·5	6·5	—	2·0	3·0	5·5	3·0	1·0	—	9·0	1·5	3·0
2·9	0·94	0·72	16th	4	—	—	1	—	20·0	3·0	—	—	1·5	10·5	0·5	1·5	—	11·0	3·5	2·5
3·8	2·53	1·07	14th	9	—	—	1	—	16·0	4·0	—	0·5	1·0	10·0	2·0	0·5	—	12·0	1·5	2·5
3·3	·55	·27	13th	4	—	—	3	—	19·0	4·0	—	1·5	1·5	6·0	1·5	1·0	1·5	13·0	2·0	3·0
4·1	1·75	·77	7th	7	—	—	2	—	15·0	6·5	—	—	4·5	5·0	2·5	2·0	1·0	4·0	8·0	4·0
3·8	1·55	·79	—	6·8	·3	·16	1·3	—	15·9	4·9	—	·6	2·5	8·06	1·5	1·7	·6	9·2	2·8	2·9

Long. 33° 0′ E. Height of Barometer Cistern above Sea, 400 feet.

3·6	2·02	0·73	4th	5·0	—	1·0	1·0	—	20·0	8·5	—	2·5	11·0	3·5	3·5	0·5	5·0	1·5	3·5	—
5·8	3·00	0·54	14th	11·0	2·0	4·0	2·0	—	9·0	14·0	—	2·0	9·0	2·0	3·0	—	3·5	1·5	7·0	—
3·8	0·83	0·30	15th	2·0	—	—	2·0	—	17·0	7·0	—	—	3·0	5·0	5·5	4·0	7·0	4·5	2·0	—
5·1	4·33	0·97	4th	10·0	—	—	2·0	—	13·5	12·5	—	0·5	—	3·5	5·5	0·5	6·0	8·0	6·0	—
2·7	1·10	0·50	2nd	8·0	—	1·0	3·0	—	21·5	4·5	—	—	1·5	—	4·5	4·0	7·0	7·0	7·0	—
3·1	1·26	1·06	20th	3·0	—	—	2·0	—	16·0	—		—	—	4·5	5·0	1·0	3·5	5·5	1·5	—
4·1	1·36	·67	14th	5·0	—	—	1·0	—	15·5	4·5	—	0·5	4·5	5·5	3·0	1·5	2·5	9·5	3·	—
5·3	4·46	1·25	25th	9·0	—	—	6·0	—	10·5	9·5	—	2·0	4·5	6·5	2·5	—	2·5	6·5	6·5	—
4·1	2·29	·81	—	6·6	·2	·7	1·5	—	15·3	7·5	—	·9	4·1	3·8	4·0	1·4	4·6	5·5	4·5	—

Long. 32° 55′ E. Height of Barometer Cistern above Sea, 5,720 feet.

·3	—	—	—	—	—	—	—	—	19·5	—	—	—	—	4·0	7·5	—	2·0	4·5	2·0	—
1·3	1·26	0·85	28th	2	—	1·0	2·0	—	26·5	2·5	—	—	1·0	1·0	6·5	0·5	5·5	9·5	7·0	—
1·3	·11	·07	3rd	2	—	1·0	1·0	—	25·0	1·5	—	—	0·5	—	11·5	1·0	4·0	6·0	8·0	—
2·1	·35	·28	21st	2	—	1·0	2·0	—	21·0	2·5	—	—	1·0	—	6·0	—	4·0	6·5	12·5	—
1·2	·43	·30	—	1·5	—	·75	1·25	—	2·3	1·6	—	—	·6	1·25	7·8	·3	3·8	6·6	7·3	—

Appendix

Annual Abstract of Meteorological Observations taken

MALTA. Lat. 35° 53′ 49″ N.

Month.	Mean Pressure.	Air Temperature.							Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.			Per Cent.	Min.	
			Min.	Max.	Temp.	Day.	Temp.	Day.		Mean.	Per Cent.	Day.
January	30·318	59·0	53·6	60·8	45·0	17th	66·0	5th	·361	73·0	58·4	15th
February	30·269	58·9	50·5	58·6	46·2	22nd	65·2	25th	·337	72·5	53·0	4th
March	30·017	63·0	53·8	64·3	50·0	28th	70·6	22nd	·425	77·5	52·2	8th
April	29·901	64·0	53·9	65·4	46·0	15th	70·8	16th	·414	72·0	55·4	29th
May	30·006	69·0	61·7	72·9	54·8	8th	79·8	16th	·501	68·0	53·6	12th
June	29·984	75·0	69·4	78·5	61·2	20th	86·8	2nd	·596	66·6	40·0	2nd
July	29·944	79·0	72·0	81·9	68·4	30th	87·6	1st	·660	64·3	51·4	9th
August	29·969	80·0	72·7	81·7	69·8	2nd	87·8	15th	·706	76·9	66·2	7th
September	29·957	80·0	72·3	79·9	67·8	26th	85·8	25th	·906	83·5	62·6	4th
October	30·029	76·0	68·9	76·1	60·2	31st	84·0	14th	·795	92·0	62·6	21st
November	30·072	68·0	53·9	68·2	51·8	30th	74·2	15th	·632	91·6	83·3	7th
December	29·975	62·0	56·7	62·9	52·4	13th	69·0	30th	·520	94·0	76·0	31st
Mean	30·036	69·4	61·6	70·9	56·1	—	77·3	—	·578	78·1	59·5	—

FORT NAPIER, NATAL. Lat. 29° 3′ S.

January	29·789	72·0	62·0	85·7	55·2	7th	101·0	30th	·599	66·4	36·8	6th
February	29·817	74·0	62·8	89·7	56·4	19th	104·2	22nd	·549	61·0	37·2	14th
March	29·892	69·0	58·4	84·6	48·2	8th	95·2	7th	·505	68·2	41·0	12th
April	29·853	69·0	56·8	83·1	49·0	25th	98·0	27th	·474	62·8	34·0	29th
May	29·962	62·0	48·0	73·6	37·2	28th	86·0	1st	·354	61·2	35·0	1st
June	30·106	58·9	43·7	76·9	38·5	20th	84·1	14th	·289	54·2	28·0	9th
July	30·040	60·0	45·2	73·9	36·0	9th	83·2	25th	·311	56·0	24·0	13th
August	29·709	62·0	48·5	76·0	38·8	31st	91·6	30th	·333	62·0	23·8	27th
September	29·924	66·0	51·9	78·2	38·8	1st	98·6	21st	·366	49·0	27·0	11th
October	29·902	67·0	55·9	77·9	42·4	25th	97·8	5th	·398	55·2	41·0	26th
November	29·455	70·0	57·4	83·3	49·6	2nd	103·2	16th	·476	57·5	31·0	10th
December	29·833	72·0	61·9	81·0	59·0	14th	105·0	12th	·515	62·0	30·0	11th
Mean	29·773	66·8	54·3	80·3	45·7	—	95·6	—	·429	59·6	32·4	—

SIERRA LEONE. Lat. 8° 29′ N.

January	29·891	81·0	73·1	91·7	70·0	20th	95·0	25th	·815	69·6	42·0	9th
February	29·869	82·6	74·7	93·0	70·0	8th	97·0	22th	·822	72·0	5[illegible]·0	21st
March	29·877	83·0	75·5	94·6	72·0	8th	97·0	8th	·809	68·0	55·0	10th
April	29·883	82·0	75·0	92·6	71·0	9th	96·0	16th	·773	68·8	55·0	2nd
May	29·896	79·1	75·2	93·2	68·0	23rd	99·0	28th	·886	96·0	58·0	2nd
June	29·934	80·0	73·2	87·6	65·0	18th	94·0	1st	·794	76·0	50·0	18th
July	29·915	78·8	73·1	89·2	70·0	1st	97·0	13th	·832	79·5	62·6	28th
August	29·935	77·0	72·1	86·6	68·0	25th	99·0	7th	·804	85·5	63·6	7th
September	29·935	53·7	71·5	86·1	62·0	12th	96·0	30th	·809	80·0	63·8	11th
October	29·924	80·6	72·1	90·5	69·0	19th	96·0	1st	·829	77·2	69·1	23rd
November	30·438	82·1	73·9	90·0	71·0	2nd	95·0	12th	·748	65·5	64·2	10th
December	29·887	81·6	74·0	93·7	70·0	19th	95·0	13th	·934	78·6	61·3	12th
Mean	29·948	78·4	73·6	90·7	68·8	—	96·5	—	·821	75·9	58·0	—

No. XIV.—*continued.*

at Netley and Foreign Stations in the Year 1882.

Long. 14° 30′ 54″ E. Height of Barometer Cistern above Sea, 70 feet.

Mean Amount of Cloud.	Rainfall.			Weather.								Wind.								
				Number of Days of								Number of Observations under each Point.								
	Total.	Max.	Day.	Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
4·6	3·14	0·94	7th	11	—	—	—	—	12·5	9·0	—	4·0	14·0	2·0	3·0	—	1·0	—	7·0	—
4·8	1·82	0·78	20th	11	—	1.0	1·0	—	10·0	8·0	—	2·0	11·0	1·0	1·0	1·0	4·0	2·0	6·0	—
3·6	2·97	0·85	28th	8	—	—	—	—	15·5	6·0	—	2·0	8·0	1·5	4·5	1·5	3·0	5·0	5·5	—
4·3	0·73	0·36	9th	8	—	—	1·0	—	12·5	7·0	—	4·0	4·5	2·0	4·0	—	2·0	5·0	8·5	—
3·0	0·09	0·06	15th	2	—	—	—	—	20·0	4·0	—	2·0	5·0	1·5	10·0	0·5	1·5	1·0	9·5	—
1·5	0·00	0·00	—	—	—	—	—	—	21·5	1 5	—	2·0	6·0	6·0	2·0	—	3·0	1·0	10·0	—
—	—	—	—	—	—	—	—	—	30·0	—	—	9·0	5·0	1·0	2·0	1·0	1·0	1·0	11·0	—
1·5	—	—	—	—	—	—	—	—	24·0	1 0	—	2·0	7·0	1·0	2·0	—	2·0	4·0	13·0	—
3·0	·08	·02	9th	5	—	—	2·0	—	14·0	5·0	—	4·0	2·0	5·0	6·0	1·0	2·0	2·0	8·0	—
5·0	1·115	·48	18th	8	—	—	—	—	8·0	7·0	—	1·0	0·5	—	12·5	2·5	·5	8·0	6·0	—
6·0	2·0	·70	19th	5	—	1·0	—	—	6·0	10·5	—	1·0	3·0	—	2·5	—	4·5	7·0	12·0	—
6·5	6·33	2·75	23rd	14	—	2·0	2·0	—	4·5	15·0	—	1·5	1·5	2·0	5·0	0·5	8·0	7·5	5·0	—
3·6	1·52	·57	—	6	—	·3	·5	—	14·8	6·1	—	2·8	5·6	1·9	4·5	·6	2·7	3·6	8·4	—

Long. 30° 2′ E. Height of Barometer Cistern above Sea, 2,200 feet.

4·4	3·26	0·37	11th	17	—	—	5	—	13·5	5·5	—	0·5	13·5	5·0	2·0	—	1·0	—	—	9·0
2·8	2·51	1·00	3rd	7	—	—	4	—	17·5	2·0	0·5	2·0	9·0	9·0	5·0	1·5	—	—	—	1·5
3·0	5·69	1·97	20th	8	—	1	5	—	21·5	5·0	—	—	1·5	5·5	15·5	2·5	0·5	1·5	—	4·0
2·7	2·44	1·24	7th	9	—	—	6	—	21·0	3·5	1·0	1·0	3·5	7·0	11·5	2·0	—	0·5	—	4·5
3·1	2·19	1·31	21st	6	—	—	3	—	20·5	4·5	—	1·0	2·0	6·5	11·5	1·0	2·0	0·5	1·5	5·0
·7	—	—	—	—	—	—	—	—	27·5	—	2·0	1·0	1·0	9·5	3·0	1·0	1·0	0·5	·5	12·5
2·3	·47	·20	31st	4	—	—	—	—	23·0	4·5	·5	5·0	3·0	13·0	2·5	1·5	·5	1·0	—	4·5
2·0	1·23	·67	1st	4	—	—	—	—	22·5	4·0	—	1·5	4·5	13·5	1·5	1·5	1·0	2·0	1·5	4·0
3·5	2·02	1·80	28th	7	—	—	1	—	17·0	13·0	—	3·5	4·5	11·5	4·0	1·0	1·0	1·0	—	4·5
5·0	2·22	·64	31st	11	—	—	2	—	10·5	13·5	1·0	1·0	6·0	11·5	6·0	·5	—	2·0	2·5	1·5
6·5	6·45	2·11	30th	17	—	1	14	—	5·5	16·0	—	2·0	6·0	11·0	7·0	1·0	—	1·0	1·5	·5
6·0	7·10	1·77	14th	12	—	—	10	—	5·5	15·5	—	2·0	5·0	13·5	5·0	2·5	1·0	0·5	0·5	1·0
3·5	2·96	1·09	—	8·5	—	·16	·41	—	17·1	7·2	·4	1·7	4·9	9·7	6·2	1·3	·6	·8	·6	4·3

Long. 13° 9′ W. Height of Barometer Cistern above Sea, 224 feet.

3·6	0·20	0·20	19th	1	—	—	—	—	21·5	9·5	—	1·5	6·5	—	—	—	1·5	3·0	14·0	4·5
3·1	—	—	—	—	—	—	—	—	22·5	—	—	2·0	5·0	—	—	—	2·0	6·0	10·0	3·0
2·9	0·15	0·15	8th	1	—	—	—	—	28·5	—	—	1·5	1·0	0·5	—	—	3·5	12·0	12·0	0·5
3·7	1·15	0·55	22nd	4	—	—	1	—	19·0	—	—	2·0	2·0	—	—	0·5	4·0	9·5	10·5	1·5
4·9	1·57	0·50	24th	8	—	—	5	—	13·0	3·0	—	1·0	1·0	—	—	—	1·0	14·0	11·0	3·0
3·7	4·02	0·80	1st	15	—	—	3	—	9·5	4·0	—	1·5	1·0	—	—	—	2·5	12·5	12·5	—
4·9	1·41	0·54	8th	5	—	—	—	—	26·0	—	—	1·0	—	—	—	—	10·0	14·0	5·0	1·0
6·2	11·17	1·64	24th	20	—	—	—	—	11·0	—	—	—	1·0	—	—	2·0	12·0	10·0	5·0	1·0
5·9	11·49	2·50	3rd	13	—	—	—	—	17·0	—	—	—	1·0	—	—	1·0	13·0	11·0	3·0	1·0
4·7	1·03	·85	19th	2	—	—	6	—	23·0	—	—	—	1·0	1·0	—	1·0	11·0	14·0	1·0	2·0
3·6	·64	·35	16th	2	—	—	4	—	24·0	—	—	5·0	11·0	3·0	—	—	1·0	3·0	6·0	1·0
2·9	·20	·20	23rd	1	—	—	1	—	29·0	—	—	6·0	9·0	1·0	—	—	1·0	6·0	7·0	1·0
4·1	2·75	·69	—	6	—	—	1·6	—	20·3	1·3	—	1·7	3·2	·4	—	·3	5·2	9·5	8·0	1·6

Appendix

Annual Abstract of Meteorological Observations taken

Barbados. Lat. 13° 7′ 39″ N.

Month.	Mean Pressure.	Air Temperature.							Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.			Per Cent.	Min.	
			Min.	Max.	Temp.	Day.	Temp.	Day.		Mean.	Per Cent.	Day.
January - -	30·061	80·0	75·7	85·3	71·0	15th	88·0	1st	·726	65·6	53·0	13th
February -	30·076	80·0	76·1	85·6	71·0	11th	87·0	7th	·750	67·8	57·0	23rd
March - -	30·061	81·0	77·6	86·5	73·0	5th	89·5	24th	·743	64·6	54·0	1st
April - -	30·041	82·0	78·5	86·2	73·0	6th	88·0	12th	·759	64·6	57·0	18th
May - -	30·035	83·0	78·6	88·0	74·0	12th	90·0	24th	·776	63·1	54·0	9th
June - -	*											
July - -	30·063	82·0	77·9	86·7	74·0	31st	88·5	26th	·822	72·0	64·0	18th
August - -	30·046	83·0	78·3	87·4	74·0	10th	89·8	30th	·820	72·0	58·0	26th
September -	30·013	85·0	78·3	88·6	74·0	9th	93·0	23rd	·804	64·0	52·0	18th
October - -	29·982	83·0	77·5	87·2	73·0	31st	89·0	7th	·818	68·0	49·0	2nd
November -	29·957	82·0	77·1	86·0	71·0	14th	88·0	3rd	·835	72·0	60·0	30th
December -	30·016	81·0	78·0	85·5	76·0	27th	87·0	1st	·787	68·0	57·0	2nd
Mean of 11 months	30·033	82·0	77·6	86·6	73·0	—	88·8	—	·785	67·4	55·9	—

* Observer sick.

Newcastle, Jamaica. Lat. 18° 6′ N.

January - -	30·225	61·0	47·1	78·2	44·0	31st	83·9	18th	·564	77·5	60·6	17th
February - -	30·238	61·0	46·3	75·9	42·0	5th	80·9	24th	·604	84·5	59·6	22nd
March - -	30·229	62·0	47·2	76·6	44·0	31st	81·9	4th	·613	77·5	57·0	20th
April - -	30·173	64·0	47·3	78·9	45·0	4th	83·9	23rd	·651	77·5	63·4	24th
May - -	30·150	67·0	54·5	79·5	47·8	10th	86·0	29th	·679	80·5	58·5	24th
June - -	30·182	70·0	57·4	83·8	50·2	16th	87·4	22nd	·715	76·1	55·1	4th
July - -	30·275	69·0	55·9	82·5	49·2	23rd	88·4	3th	·639	72·4	50·0	15th
August - -	30·259	69·0	56·6	82·6	51·0	2nd	87·6	10th	·666	73·6	59·4	12th
September -	30·197	69·0	60·2	82·2	58·0	19th	86·8	13th	·715	72·6	62·4	15th
October - -	30·179	67·0	58·4	81·5	56·4	26th	87·0	17th	·664	73·4	63·0	31st
November -	30·183	64·0	57·1	78·2	53·0	19th	86·2	21 & 29	·569	70·2	47·5	21st
December -	30·217	64·0	56·8	80·3	53·2	31st	85·0	24 & 28	·592	68·3	49·6	31st
Mean -	30·206	65·5	53·7	80·0	49·4	—	85·4	—	·639	75·2	57·0	—

Upper-Park Camp, Jamaica. Lat. 17° 59′ N.

January - -	30·064	80·0	61·0	85·9	60·0	5th	89·6	12th	·565	55·4	48·8	13th
February -	30,088	78·0	62·0	85·5	58·0	10th	88·6	18th	·589	61·6	28·1	1st
March - -	30·074	79·0	63·2	85·5	61·0	7th	88·6	6th	·604	64·7	49·4	24th
April - -	30·031	82·0	64·4	87·0	62·0	9th	91·6	5th	·656	60·2	44·7	21st
May - -	30·015	83·0	66·0	88·2	63·0	5th	90·6	7th	·665	60·1	50·1	29th
June - -	30·035	85·7	67·9	89·8	66·0	18th	93·6	2nd	·663	52·5	43·0	4th
July - -	30·217	85·0	71·0	89·0	67·0	7th	94·0	12th	·678	57·0	43·0	15th
August - -	30·003	84·0	68·0	88·0	66·0	18th	93·0	27th	·723	61·2	46·0	10th
September -	29·922	84·3	68·9	88·0	66·0	25th	91·0	20th	·757	79·2	55·0	29th
October - -	29·910	82·1	67·4	86·0	64·0	5th	89·0	14th	·772	68·0	55·0	9th
November -	29·916	82·0	65·7	85·0	64·0	14th	92·0	26th	·718	68·0	51·0	14th
December -	29·897	82·0	67·4	86·0	64·0	5th	89·0	14th	·726	68·0	55·0	9th
Mean -	30·014	82·2	66·0	86·8	63·4	—	90·8	—	·676	62·9	47·4	—

No. XIV.—*continued.*

at Netley and Foreign Stations in the Year 1882.

Long. 59° 40′ 8″ W. Height of Barometer Cistern above Sea, 30 feet.

Mean Amount of Cloud.	Rainfall.			Weather.								Wind.							
				Number of Days of								Number of Observations under each Point.							
	Total.	Max.	Day.	Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
3·2	1·64	·20	4th	27	—	—	—	—	27·0	2·0	—	—	31·0	—	—	—	—	—	—	—
3·8	1·36	·28	12th	16	—	—	—	—	20·5	1·5	—	—	28·0	—	—	—	—	—	—	—
3·5	2·74	2·52	29th	5	—	—	—	—	24·0	3·0	—	—	31·0	—	—	—	—	—	—	—
3·2	1·22	0·38	14th	6	—	—	—	—	25·0	1·0	—	—	30·0	—	—	—	—	—	—	—
3.6	2·66	1·44	31st	12	—	—	—	—	24·0	0·5	—	—	31·0	—	—	—	—	—	—	—
3·5	5·04	1·41	30th	21	—	—	—	—	24·5	2·0	—	—	31·0	—	—	—	—	—	—	—
3·5	3·46	·96	9th	19	—	—	—	—	25·0	2·5	3·0	—	24·0	1·0	6·0	—	—	—	—	—
3·8	4·42	2·45	25th	13	—	—	—	—	21·5	3·5	—	—	14·5	2·5	12·5	—	—	·5	—	—
4·5	8·45	1·65	14th	17	—	—	—	—	21·0	5·5	—	—	21·0	—	10·	—	—	—	—	—
4·5	8·16	1·65	13th	22	—	—	—	—	18·5	2·0	—	—	25·0	—	5·	—	—	—	—	—
3·2	2·9	·69	16th	17	—	—	—	—	23·0	·5	—	—	25·0	1·0	*					
3·6	3·8	1·23	—	15·9	—	—	—	—	23·0	2·1	·2	—	26·5	·4	·3	—	—	·04	—	—

* Observer sick from 6th to 9th of this month. No observations taken.

Long. 76° 42′ W. Height of Barometer Cistern above Sea, 3,800 feet.

5·8	3·28	2·17	3rd	10	—	—	—	—	4·0	6·5	—	—	—	—	—	—	—	—	—
5·5	2·36	·80	13th	13	—	—	—	—	2·5	5·0	—	2·0	3·5	4·0	2·0	0·5	0·5	3·5	0·5	11·5
5·6	5·57	3·00	4th	11	—	—	—	—	3·5	6·0	—	4·5	4·5	3·0	1·5	1·5	0·5	7·5	—	8·0
5·3	5·02	2·00	9th	10	—	—	—	—	7·0	7·0	—	1·5	1·5	4·5	0·5	3·0	1·5	3·5	1·5	12·5
5·7	5·46	1·61	24th	12	—	—	—	—	11·0	11·0	—	0·5	1·5	3·0	3·5	0·5	1·5	2·0	0·5	18·0
4·4	·23	·13	15th	5	—	—	—	—	12·0	5·0	—	—	8·0	5·0	8·0	0·5	—	0·5	—	8·0
6·07	3·56	·94	17th	11	—	—	1	—	4·5	10·0	—	1·0	14·0	1·0	6·5	—	—	·5	·5	7·5
6.32	8·07	2·80	7th	19	—	—	7	—	5·5	10·5	—	1·0	13·5	2·5	3·5	0·5	1·5	·5	1·0	7·0
6·4	13·05	1·96	17th	22	—	—	5	—	7·5	11·5	—	2·5	9·5	3·5	4·0	—	1·0	3·0	1·0	5·5
6·5	16·71	1·86	23rd	22	—	—	3	—	7·0	13·5	—	2·5	12·5	5·5	2·0	1·0	1·0	·5	1·0	5·0
5·5	7·28	1·63	30th	23	—	—	2	—	7·5	7·5	1	0·5	15·5	4·0	2·5	—	1·0	2·5	1·0	3·0
5·5	10·38	4·97	1st	10	—	—	—	—	6·5	8·5	—	—	12·5	5·5	4·5	1·0	1·5	—	—	6·0
5·71	6·74	1·9	—	14	—	—	1·5	—	6·5	8·5	0·8	1·3	8·04	3·4	3·2	·7	·8	2·0	·5	7·6

Long. 76° 56′ W. Height of Barometer Cistern above Sea, 235 feet.

4·3	0·55	0·36	4th	4	—	—	—	—	8·5	1·5	—	2·5	2·0	—	14·0	2·0	8·0	1·5	0·5	—
5·4	1·16	0·78	11th	5	—	—	—	—	7·	7·	—	1·5	0·5	0·5	14·0	3·0	3·5	1·0	1·0	3·5
5·8	1·24	0·82	4th	4	—	—	2	—	7·0	10·0	—	2·5	0·5	1·	15·5	1·0	6·5	3·0	1·0	—
4·9	1·60	0·50	8th	6	—	—	—	—	7·0	2·0	—	—	0·5	—	15·5	9·5	3·5	1·0	—	—
5·2	2·00	1·50	16th	4	—	—	2	—	9·5	4·5	—	1·0	0·5	—	19·0	4·5	4·5	1·0	0·5	—
4·7	0·10	0·10	29th	1	—	—	—	—	11·0	4·5	14.5	—	—	1·0	22·0	2·0	2·0	3·0	—	—
4·0	0·74	0·32	28th	6	—	—	2	—	4·5	2·0	—	1·5	2·5	·5	18·5	0·5	2·5	0·5	1·0	3·5
4·0	3·45	2·24	17th	14	—	—	10	—	7·5	1·5	5·0	—	3·0	—	12·5	—	0·5	—	2·5	12·5
4·0	4·97	1·54	22nd	13	—	—	6	—	13·0	5·5	—	—	6·0	—	10·0	0·5	0·5	—	0·5	12·5
4·7	10·17	3·20	8th	15	—	—	10	—	10·0	3·0	—	—	1·5	—	14·5	—	0·5	—	—	14·5
4·0	0·92	0·34	5th	4	—	—	—	—	8·0	—	—	1·0	1·5	—	14·5	0·5	1·0	—	—	11·5
4·7	1·07	0·56	23rd	4	—	—	—	—	10·0	3·0	—	—	1·5	—	14·5	—	·5	—	—	14·5
4·6	2·32	1·02	—	6·6	—	—	2·6	—	8·5	3·7	1·6	·8	1·6	·2	15·3	1·9	2·7	·9	·5	6·0

Appendix

Annual Abstract of Meteorological Observations taken

NASSAU, BAHAMAS. Lat. 25° 5′ N.

Month.	Mean Pressure.	Air Temperature.							Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.			Per Cent.	Min.	
			Min.	Max.	Temp.	Day.	Temp.	Day.		Mean.	Per Cent.	Day.
January -	30·251	73·0	65·0	74·6	58·0	1st	78·5	20th	·595	71·6	53·0	21st
February-	30·252	73·0	65·9	74·9	58·5	25th	80·0	3rd	·623	73·3	60·8	20th
March -	30·226	74·0	66·1	76·4	60·5	16th	82·0	28th	·599	66·8	53·8	15th
April -	30·099	77·0	68·4	80·0	63·5	8th	85·8	21st	·704	71·0	56·6	29th
May -	30·086	79·0	70·4	81·2	64·0	5th	87·0	31st	·786	74·6	55·8	13th
June -	30·136	82·0	72·5	85·4	66·0	17th	89·5	20th	·844	69·6	60·8	17th
July -	30·168	84·0	74·8	86·7	69·0	14th	89·5	4th	·821	66·3	51·5	4th
August -	30·124	84·0	75·7	87·5	70·8	13th	91·0	10th	·802	64·9	50·5	5th
September	30·052	83·3	75·0	—	71·5	30th	—	—	·787	66·7	52·6	17th
October -	29·963	81·0	73·1	—	69·5	20th	—	—	·769	70·4	53·0	26th
November	30·038	76·0	68·8	—	63·0	19th	—	—	·610	67·4	51·5	30th
December	30·106	74·2	66·8	—	57·0	17th	—	—	·627	72·4	51·6	4th
Mean -	30·125	78·3	70·2	80·8	64·2	—	85·4	—	·713	69·5	54·2	—

BERMUDA. Lat. 32° 17′ N.

January -	30·123	64·0	58·7	70·9	45·0	30th	75·0	1st	·545	88·7	65·0	1st
February	30·179	65·0	58·7	71·1	46·0	22nd	75·0	15th	·569	85·6	65·0	2nd
March -	30·054	62·0	52·0	70·0	42·0	16th	74·0	9th	·345	65·9	51·8	6th
April -	30·074	67·0	57·6	74·4	49·0	3rd	78·0	14th	·560	77·0	51·0	5th
May -	30·121	71·3	63·4	77·0	58·0	3rd	83·0	26th	·752	94·0	84·0	16th
June -	30·158	76·0	70·0	80·0	65·0	10th	84·0	26th	·820	84·0	82·0	6th
July -	30·246	82·0	74·0	86·0	69·0	7th	90·0	17th	·795	68·0	47·0	23th
August -	30·154	83·0	73·0	87·0	62·0	19th	90·0	3rd	·893	80·0	61·0	28th
September	30·020	78·0	61·0	84·0	56·0	30th	90·0	3rd	·846	80·0	49·0	5th
October -	30·057	74·1	58·0	80·0	50·0	7th	86·0	28th	·738	79·0	64·0	19th
November	29·964	68·0	54·1	74·9	45·0	16th	81·0	8th	·568	71·8	56·0	23rd
December	30·250	62·7	55·0	69·8	44·0	19th	76·0	7th	·455	75·5	51·0	28th
Mean -	30·118	71·0	61·2	77·0	52·7	—	81·8	—	·657	79·1	60·5	—

SINGAPORE. Lat. 1° 16′ N.

January -	29·265	80·0	67·6	96·2	65·6	1st	99·2	20th	·941	74·8	68·0	5th
February	29·266	80·0	67·6	92·2	65·0	27th	98·6	2nd	·917	76·4	70·4	21st
March -	29·266	80·0	68·9	95·1	67·2	24th	96·2	27th	·907	77·2	71·2	19th
April -	29·266	82·0	68·9	94·8	66·2	20th	96·6	30th	·903	72·0	61·0	4th
May -	29·254	81·0	68·8	93·3	64·6	14th	96·6	15th	·918	83·5	48·8	12th
June -	29·253	79·0	70·1	92·8	65·0	30th	96·8	18th	·936	80·0	60·0	19th
July -	29·254	82·0	71·2	92·4	63·0	25th	96·6	13th	·936	80·0	73·0	13th
August -	29·156	80·0	69·6	91·4	63·2	8th	94·8	6th	·934	80·0	56·0	11th
September	29·039	79·0	69·5	91·6	65·0	2nd	96·8	7th	·883	85·0	64·0	23rd
October -	28·913	80·0	68·4	91·2	65·0	31st	96·2	18th	·904	80·0	55·0	4th
November	29·072	79·0	67·6	91·4	65·1	25th	96·5	19th	·878	90·0	73·0	9th
December	29·025	79·0	67·4	90·4	65·0	19th	94·6	28th	·919	90·0	68·0	19th
Mean -	29·169	80·0	68·8	92·9	65·0	—	96·8	—	·914	80·7	64·0	—

No. XIV.—*continued.*

at Netley and Foreign Stations in the Year 1882.

Long. 77° 21′ W. Height of Barometer Cistern above Sea, 44 feet.

Mean Amount of Cloud.	Rainfall.			Weather.								Wind.								
				Number of Days of								Number of Observations under each Point.								
	Total.	Max.	Day.	Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
4·9	0·71	0·27	22nd	7·0	—	—	—	—	7·5	4·5	—	1·0	8·0	8·5	6·5	3·0	1·5	—	2·5	—
5·6	0·27	0·11	4th	5·0	—	—	—	—	2·5	8·0	—	1·5	13·0	3·0	4·0	1·0	2·5	0·5	2·0	—
4·8	0·18	0·18	31st	1·0	—	—	—	—	7·5	4·0	—	0·5	14·5	2·0	6·0	3·5	3·0	—	1·5	—
5·9	3·73	1·89	15th	8·0	—	—	1·0	—	6·0	10·0	—	1·0	7·0	2·0	6·5	2·5	5·5	1·0	4·5	—
6·7	4·61	1·30	12th	14·0	—	—	4·0	—	4·5	11·5	—	1·5	6·5	3·5	6·0	4·0	5·0	1·0	3·5	—
5·6	2·83	·92	10th	13·0	—	—	6·0	—	4·0	6·5	—	2·5	4·0	3·5	8·5	6·0	4·5	1·0	—	—
5·6	3·89	1·02	13th	19·0	—	—	7·0	—	3·5	8·5	—	·5	3·0	6·5	12·5	4·5	2·0	0·5	0·5	—
6·0	3·24	·54	31st	14·0	—	—	1·0	—	4·5	10·5	—	2·5	6·0	4·5	12·0	2·0	3·0	—	1·0	—
6·0	3·16	1·17	30th	11·0	—	—	—	—	2·0	8·5	—	—	12·5	7·0	5·5	2·5	2·0	—	·5	—
5·9	2·68	·53	21st	11·0	—	—	2·0	—	4·0	10·0	—	2·5	10·5	2·5	5·0	1·5	7·0	·5	1·5	—
6·0	0·73	·18	3rd	9·0	—	—	1·0	—	1·5	7·5	—	3·0	17·0	0·5	1·0	1·0	4·5	1·0	2·0	—
6·0	0·53	·18	2nd	9·0	—	—	—	—	3·0	10·5	—	4·5	15·5	—	4·0	1·5	4·0	—	1·5	—
5·7	2·12	·69	—	10·0	—	—	1·8	—	4·2	8·3	—	1·75	9·7	3·5	6·5	2·7	3·7	4·5	1·7	—

Long. 64° 47′ W. Height of Barometer Cistern above Sea, 151 feet.

6·6	2·70	2·50	2nd	2·0	—	—	—	—	3·5	11·5	—	2·5	9·5	—	2·5	0·5	12·0	0·5	3·5	—
6·7	4·68	2·30	11th	8·0	—	—	—	—	1·5	11·0	—	—	10·5	—	1·5	—	10·0	1·0	5·0	—
6·8	6·36	2·50	6th	9·0	—	—	1·0	—	3·0	13·5	—	1·5	7·5	—	5·5	0·5	8·0	1·0	7·0	—
6·4	3·11	0·80	14th	9·0	—	—	—	—	2·5	8·5	—	1·5	5·5	—	3·5	—	9·5	—	10·0	—
6·0	5·73	1·84	18th	9·0	—	—	—	—	16·0	10·6	—	1·0	5·5	0·5	2·0	2·0	14·0	1·0	5·0	—
5·5	3·67	0·92	1st	9·0	—	—	—	—	4·0	9·0	—	0·5	7·0	0·5	3·5	1·5	10·0	1·0	6·0	—
5·0	3·57	1·35	9th	8·0	—	—	—	—	7·5	3·0	—	—	2·5	—	3·5	·5	19·5	—	5·0	—
6·0	5·48	2·30	30th	9·0	—	—	—	—	—	8·0	—	0·5	7·5	0·5	3·0	—	12·0	0·5	7·0	—
6·0	6·17	2·02	26th	11·0	—	—	—	—	3·0	8·0	—	—	13·0	1·0	12·0	—	2 0	—	2·0	—
6·0	7·82	2·00	31st	13·0	—	—	1·0	—	·5	7·5	—	0·5	6·5	—	10·5	0·5	9·5	—	3·5	—
6·5	5·97	1·84	15th	13·0	—	—	—	—	4·0	13·5	—	3·0	10·0	1·0	4·5	—	6·5	—	5·0	—
7·0	2·77	0·73	14th	10·0	—	—	—	—	5·0	19·0	—	6·0	13·0	0·5	0·5	1·0	6·0	1·0	3·0	—
6·2	4·83	1·75	—	9·08	—	—	·1	—	4·2	10·2	—	1·4	8·1	·8	4·3	·5	9·9	0·5	5·1	—

Long. 105° 31′ E. Height of Barometer Cistern above Sea, 110 feet.

4·3	6·86	3·02	1st	18	—	—	—	—	—	1·5	—	27·0	—	0·5	—	—	—	3·5	—	—
5·2	13·86	3·87	26th	21	—	—	—	—	—	5·5	—	25·0	—	—	—	—	—	3·0	—	—
4·1	1·07	0·41	2nd	4	—	—	—	—	—	—	—	3·0	—	0·5	—	—	—	27·5	—	—
4·7	6·51	1·21	18th	13	—	—	—	—	7·0	9·0	1·0	22·0	—	·5	—	—	—	7·5	—	—
4·0	6·39	1·68	15th	12	—	—	2	—	—	1·0	—	13·0	—	—	—	4·5	—	13·5	—	—
4·5	4·24	1·65	28th	12	—	—	5	—	—	3·5	—	—	—	—	—	3·5	—	26·5	—	—
4·5	3·83	1·14	5th	7	—	—	4	—	—	5·0	—	—	—	—	—	3·0	3·0	19·5	0·5	—
5·0	5·87	·99	22nd	16	—	—	2	—	—	6·0	—	1·0	—	—	—	2·0	3·0	24·5	·5	—
4·5	5·55	1·47	1st	14	—	—	1	—	—	3·5	—	—	—	—	—	2·0	5·5	23·0	·5	—
5·0	7·31	1·63	23rd	18	—	—	2	—	—	4·0	—	7·0	—	—	1·5	1·	2·	19·5	—	—
5·5	6·18	1·15	5th	14	—	—	1	—	—	5·5	—	1·5	—	—	—	2·0	—	24·0	2·5	—
5·0	5·54	1·48	17th	15	—	—	1	—	—	3·5	—	7·0	0·5	—	2·5	—	—	11·0	10·0	—
4·6	6·08	1·64	—	13·6	—	—	1·5	—	·5	4·0	·08	8·8	·04	·12	·3	1·9	1·1	16·8	1·1	—

Appendix

Annual Abstract of Meteorological Observations taken

HONG KONG, CHINA. Lat. 22° 16′ 20″ N.

Month.	Mean Pressure.	Air Temperature.							Tension of Vapour.	Relative Humidity.		
		Mean, 9 a.m.	Means of.		Abs. Min.		Abs. Max.			Per Cent.	Minimum.	
			Min.	Max.	Temp.	Day.	Temp.	Day.		Mean.	Per Cent.	Day.
January	30·182	64·0	56·5	66·1	48·0	9th	75·5	25th	·462	83·9	60·0	10th
February	30·159	63·0	54·4	63·6	47·0	6th	73·5	16th	·412	81·0	61·5	23rd
March	30·109	65·0	58·3	67·7	51·0	6th	80·0	19th	·488	83·9	57·0	16th
April	29·943	71·0	67·2	76·6	56·0	6th	85·0	29th	·662	83·5	53·0	16th
May	29·830	78·0	73·5	82·8	66·5	1st	90·0	13th	·815	84·0	69·0	30th
June	29·738	81·0	78·28	87·23	72·0	1st	93·0	26th	·919	81·3	69·5	27th
July	29·737	82·0	78·71	88·89	74·5	11th	95·0	31st	·927	77·2	60·0	31st
August	29·690	81·0	76·68	86·87	73·5	4th	93·0	1st	·931	84·5	55·0	5th
September	29·831	81·0	77·47	86·75	75·0	5th	92·0	11th	·926	79·5	62·0	30th
October	29·947	78·0	74·37	83·66	71·5	29th	91·0	7th	·730	71·4	56·0	28th
November	30·082	70·0	65·43	74·33	51·5	27th	83·0	1st	·502	65·8	38·0	28th
December	30·127	64·0	56·89	67·61	41·5	22nd	78·0	5th	·360	63·0	35·5	27th
Mean	29·946	73·0	68·14	77·67	60·2	—	85·5	—	·677	78·1	56·3	—

Summary of Results of Meteorological Observations taken

Stations, with their Height above the sea.	Air Pressure.	Air Temperature.							Tension of Vapour.	Relative Humidity.			Mean amount of Cloud.
		Mean, 9 a.m.	Means of		Abs. Min.		Abs. Max.			Per Cent.	Min.		
			Min.	Max.	Temp.	Day.	Temp.	Day.		Mean.	Per Cent.	Day.	
Mediterranean:	ft.												
Gibraltar	53	30·108	65·5	57·3	73·2	51·9	—	79·3	—	·534	83·8	69·9	—	3·6
Scutari	60	29·990	64·1	48·1	68·3	38·9	—	77·8	—	·369	69·9	52·2	—	4·9
Cyprus:														
Nicosia	592	—	—	43·5	69·1	35·3	—	79·4	—	·309	65·8	47·3	—	3·8
Polymedia	400	29·848	61·5	51·5	70·3	43·9	—	79·3	—	·387	63·2	43·2	—	4·1
Troados	5,720	29·64	53·6	56·9	77·4	46·2	—	84·0	—	·360	43·7	27·5	—	1·2
Malta	70	30·066	69·4	61·6	70·9	56·1	—	77·3	—	·578	78·1	59·5	—	3·6
Africa:														
Natal, "Fort Napier"	2,200	29·773	66·8	54·3	80·3	45·7	—	95·6	—	·429	59·6	32·4	—	3·5
Sierra Leone	224	29·946	78·4	73·6	90·7	68·8	—	96·5	—	·831	75·9	58·0	—	4·1
American & West Indies:														
Barbados	30	30·033	82·0	77·6	86·6	73·0	—	88·8	—	·785	67·4	55·9	—	3·6
Newcastle, Jamaica	3,800	30·206	68·5	53·7	80·0	49·4	—	85·4	—	·639	75·2	57·0	—	5·71
Upper Park Camp „	225	30·014	82·2	66·8	86·8	63·4	—	90·8	—	·676	62·9	47·4	—	4·6
Nassau, Bahamas	44	30·125	78·3	70·2	80·9	64·2	—	85·4	—	·713	69·5	54·2	—	5·7
Bermuda	151	30·118	71·0	61·2	77·0	52·7	—	81·8	—	·557	79·1	60·5	—	6·2
Singapore	110	29·169	80·0	68·8	92·9	65·0	—	96·8	—	·914	80·7	64·0	—	4·6
Hong Kong	18	29·946	73·0	68·1	77·6	60·2	—	85·5	—	·677	78·1	56·3	—	6·17

No. XIV.—*continued.*

at Netley and Foreign Stations in the Year 1882.

Long. 114° 9′ 16″ E. Height of Barometer Cistern above Sea, 18 feet.

Mean Amount of Cloud.	Rainfall.			Weather.								Wind.								
				Number of Days of								Number of Observations under each Point.								
	Total.	Max.	Day.	Rain.	Snow.	Hail.	Thunder Storm.	Fog.	Clear Sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	NW.	Calm.
5·0	0·46	0·17	5th	5·0	—	—	—	—	13·5	15·5	—	1·5	1·5	17·0	2·0	—	—	0·5	3·5	5·0
6·6	1·00	0·49	17th	7·0	—	—	—	—	9·0	16·5	—	2·5	5·5	10·5	0·5	—	—	1·5	3·5	4·0
7·1	0·64	0·20	26th	11·0	—	—	—	—	7·0	20·0	—	2·0	3·5	11·0	4·0	—	1·0	2·0	2·5	5·0
7·8	14·68	3·91	16th	20·0	—	—	1	—	3·0	20·5	—	—	—	10·0	6·0	1·5	4·5	4·0	0·5	4·5
7·1	10·55	5·39	15th	21·0	—	—	—	—	3·0	15·5	2·0	—	—	8·0	5·5	3·0	5·5	4·0	0·5	3·5
7·10	17·09	5·56	17th	21·0	—	—	1	—	3·5	17·0	—	0·5	0·5	8·5	5·0	5·0	2·0	5·0	—	4·5
6·48	17·53	2·29	11th	16·0	—	—	1	—	7·5	13·5	—	0·5	—	7·0	0·5	4·0	8·0	6·5	—	4·5
4·88	5·40	1·27	4th	15·0	—	—	—	—	11·5	6·5	1·0	1·0	1·0	18·5	0·5	—	3·0	3·0	1·0	2·0
3·41	1·29	1·23	11th	2·0	—	—	1	—	19·5	3·5	1·0	—	0·5	25·0	0·5	—	·5	1·5	·5	2·5
6·41	·50	·18	23rd	6·0	—	—	—	—	9·5	17·0	1·0	1·5	7·5	10·0	2·0	—	—	3·5	3·0	3·5
5·04	·09	·04	20th	3·0	—	—	—	—	14·0	12·5	—	2·5	5·5	10·0	2·0	—	·5	2·0	3·0	5·5
6·17	6·11	1·88	—	11·4	—	—	·5	—	8·8	14·6	·4	10·4	2·2	13·2	3·08	1·1	2·3	2·7	15·4	4·0

at Foreign Stations in the Year 1882.

Rainfall.			Weather.								Wind.									Latitude.	Longitude.
			Number of days of								No. of Observations under each Point.										
Total.	Max.	Day.	Rain.	Snow.	Hail.	Thunder-storm.	Fog.	Clear sky.	Overcast.	Gales.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N W.	Calm.		
																				° ′ ″	° ′ ″
1·51	·51	—	5	—	—	—	1·04	15·7	5·7	—	·04	4·4	8·6	·66	·08	3·3	7·9	5·2	·12	36 6 0 N.	5 20 0 W.
1·70	·63	—	9	1·8	·5	1·08	·4	12·5	10·04	·25	5·0	9·4	2·08	·5	3·9	5·2	·7	·7	2·7	41 0 0 N.	29 3 0 E.
1·55	·79	—	6·8	·3	·08	1·3	—	15·9	4·9	—	·6	2·5	8·08	1·5	1·7	·6	9·2	2·8	2·9	35 10 50 N.	33 21 15 E.
2·29	·81	—	6·6	·2	·7	1·5	—	15·3	7·5	—	·9	4·1	3·8	4·0	1·4	4·6	5·5	4·5	—	34 40 0 N.	33 0 0 E.
·43	·30	—	1·5	—	·75	1·25	—	2·3	1·6	—	—	·6	1·25	7·8	·3	3·8	6·6	7·3	—	34 57 0 N.	32 55 0 E.
1·52	·57	—	6·0	—	·3	·5	—	14·8	6·1	—	2·8	5·6	1·9	4·5	·6	2·7	3·6	8·4	—	35 53 49 N.	14 30 54 E.
2·96	1·09	—	8·5	—	·16	·41	—	17·1	7·2	·4	1·7	4·9	9·7	6·2	1·3	·6	·8	·6	·43	29 3 0 S.	30 2 0 E.
2·75	·69	—	6·0	—	—	1·6	—	20·3	1·3	—	1·7	3·2	·4	—	·3	5·2	9·5	8·0	1·6	8 29 0 N.	13 9 0 W.
3·8	1·23	—	15·9	—	—	—	—	23·0	2·1	·2	—	26·5	·4	·3	—	—	·04	—	—	13 7 39 N.	59 40 8 W.
6·74	1·9	—	14·0	—	—	1·5	—	6·5	8·5	·08	1·3	8·04	3·4	3.2	·7	·8	2·0	·5	7·6	18 32 0 N.	76 42 0 W.
2·32	1·02	—	6·6	—	—	2·6	—	8·5	3·7	1·6	·8	1·6	·2	15·3	1·9	2·7	·9	·5	6·0	17 59 0 N.	76 56 0 W.
2·12	·69	—	10·0	—	—	1·8	—	4·2	8·3	—	1·75	9·7	3·5	6·5	2·7	3·7	4·5	1·7	—	25 5 0 N.	77 21 0 W.
4·83	1·75	—	9·08	—	—	·1	—	4·2	10·2	—	1·4	8·1	·3	4·3	·5	9·9	·5	5·1	—	32 17 0 N.	64 47 0 W.
6·08	1·64	—	13·6	—	—	1·5	—	·5	4·0	·08	8·8	·04	·12	·3	1·9	1·1	16·8	1·1	—	1 16 0 N.	105 31 0 E.
6·11	1·88	—	11·4	—	—	·5	—	8·8	14·6	·4	10·4	2·2	13·2	3·08	1·1	2·3	2·7	15·4	4·0	22 16 20 N.	114 9 16 E.

APPENDIX No. X

TABLE showing the AVERAGE STRENGTH of the TROOPS at each of the PRINCIPAL STATIONS in the UNITED KINGDOM, with the ADMISSIONS into HOSPITALS for PRIMARY VENEREAL SORES, SECONDARY SYPHILIS, and GONORRHŒA respectively in each year from 1860 to 1882 inclusive.

Stations.	1860.				1861.				1862.				1863.				1864.			
	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.
Devonport and Plymouth	3,825	609	125	684	3,537	703	161	623	3,426	500	152	497	2,782	344	145	354	2,461	274	53	257
Portsmouth - -	5,710	1,073	260	1,057	5,107	851	188	1,041	4,691	606	223	839	4,630	497	246	630	4,426	536	261	576
Chatham, Sheerness, and Gravesend - -	5,647	601	157	919	4,609	470	263	622	3,634	337	276	511	3,899	366	121	590	3,804	334	166	554
Woolwich - - -	6,877	1,250	470	1,065	5,967	833	399	894	5,897	781	234	878	5,234	500	153	641	4,834	384	123	417
Aldershot - - -	15,164	1,930	485	1,631	12,898	1,894	451	1,363	12,078	1,400	478	1,548	11,746	1,227	487	1,116	10,700	1,129	504	1,201
Windsor - - -	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Shornclife - - -	3,631	476	136	386	3,758	459	88	434	3,589	234	86	389	2,905	236	67	338	2,530	208	96	251
Colchester - - -	2,609	440	68	451	2,135	286	63	350	1,479	233	63	247	1,850	241	102	289	2,089	247	73	370
Winchester - - -	1,449	176	47	293	1,186	118	47	198	674	107	19	133	621	63	20	88	647	72	21	117
Dover - - -	2,405	365	94	306	2,339	352	60	432	2,054	213	69	299	2,188	215	51	325	2,214	199	48	306
Canterbury - - -	1,880	155	47	237	1,593	227	65	254	1,124	119	74	247	1,079	147	68	209	1,178	80	41	204
Maidstone - - -	492	53	13	59	413	14	13	39	271	6	7	17	239	24	4	24	216	8	14	9
Cork - - -	1,848	223	49	205	1,835	217	53	248	1,408	153	29	131	1,126	106	63	93	1,070	81	33	111
Curragh - - -	5,942	1,017	221	623	5,963	853	329	636	5,007	544	176	547	5,060	615	219	477	4,505	561	205	418
Total - -	57,479	8,405	2,173	7,966	51,238	7,267	2,077	7,133	45,233	5,234	1,874	6,283	43,419	4,655	1,774	5,302	40,694	4,135	1,631	4,803
Isle of Wight - -	1,245	111	32	163	1,164	100	40	135	800	86	17	134	1,037	50	38	125	1,118	83	35	162
London - - -	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Warley - - -	No returns.				336	30	27	34	323	63	38	116	692	88	36	135	581	30	24	97
Hounslow - -	386	46	28	37	367	49	13	30	547	52	13	9	513	45	13	26	536	24	16	13
Pembroke Dock - -	1,515	92	26	125	1,262	87	30	147	750	36	27	73	819	43	22	75	805	53	29	84
Sheffield - - -	509	85	9	67	632	61	16	63	573	76	25	70	626	47	29	46	567	31	6	46
Manchester - -	1,168	135	17	130	1,118	258	13	210	1,051	185	45	192	1,031	96	70	117	963	100	66	91
Preston - - -	944	126	15	190	1,068	88	20	82	710	38	31	134	608	39	67	96	855	86	13	196
Edinburgh - -	1,471	173	37	197	1,496	145	22	176	1,409	96	49	207	1,303	128	35	176	1,128	74	24	110
Fermoy - - -	1,666	172	19	173	1,820	117	18	145	1,204	43	30	83	1,355	87	35	122	1,425	49	29	102
Limerick - - -	1,287	154	11	229	1,346	150	30	157	1,064	148	27	146	910	146	18	68	783	101	25	71
Athlone - - -	922	81	19	201	717	100	39	82	810	41	27	99	876	38	18	113	738	107	46	93
Dublin - - -	5,425	1,009	239	706	4,899	706	235	566	4,545	377	165	715	4,622	741	196	647	4,607	825	211	494
Belfast - - -	812	106	28	154	1,001	158	30	196	640	58	23	101	650	54	37	71	789	86	23	76
London & Windsor combined	5,782*	766	164	297	5,757	859	214	299	4,755	621	174	367	4,987	745	193	361	5,093	808	183	389
Total - -	22,900	3,058	644	2,671	22,883	2,986	747	2,823	19,781	2,121	691	2,457	20,119	2,357	807	2,177	19,967	2,455	729	2,025

Stations.	1865.				1866.				1867.				1868.				1869.				1870.			
	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.
Devonport and Plymouth	2,569	342	70	377	2,556	209	76	432	2,443	185	57	434	2,418	159	87	359	2,199	162	45	274	2,206	85	29	263
Portsmouth	4,834	545	175	662	4,510	452	157	747	4,351	504	148	782	4,928	422	133	925	4,668	289	103	586	4,548	232	101	564
Chatham Sheerness, and Gravesend	4,188	360	132	534	3,995	259	142	497	4,461	317	189	587	4,469	284	127	699	4,024	163	100	457	4,115	193	74	434
Woolwich	4,795	363	107	394	4,607	410	106	385	4,992	432	128	563	5,003	233	122	474	5,261	271	112	465	5,569	241	88	547
Aldershot	11,049	1,108	390	1,235	9,211	742	265	815	7,894	638	255	784	9,879	760	283	992	10,598	668	331	1,103	11,235	757	370	1,063
Windsor	—	—	—	—	—	—	—	—	1,074	62	—	60	1,053	143	—	66	1,065	96	20	84	1,070	72	16	53
Shornoliffe	2,744	187	103	265	2,404	137	50	267	2,616	111	65	326	2,554	197	112	314	2,637	163	53	271	2,145	80	47	157
Colchester	2,366	254	82	398	2,255	389	65	422	2,378	346	80	538	2,059	374	116	440	1,888	160	53	273	1,677	70	28	214
Winchester	978	71	20	202	928	43	28	137	902	47	47	116	882	93	43	152	794	80	21	104	441	27	9	27
Dover	2,387	160	46	174	2,078	186	29	217	2,014	287	96	275	2,366	262	92	428	2,433	195	100	252	2,477	75	64	223
Canterbury	1,000	77	24	100	951	109	45	122	981	116	23	173	1,148	131	44	241	956	43	31	130	732	111	26	129
Maidstone	344	61	12	68	375	52	12	55	384	93	13	108	433	53	10	98	443	57	13	117	205	14	10	35
Cork	1,483	123	45	126	1,768	87	37	112	1,570	113	27	119	1,443	88	41	117	1,624	119	34	131	1,685	129	46	149
Curragh	4,411	427	138	352	4,758	369	126	365	3,931	409	122	409	3,935	335	109	380	3,412	299	75	219	3,273	183	88	234
Total	43,078	4,077	1,344	4,937	39,476	3,444	1,188	4,573	39,911	3,640	1,250	5,274	42,595	3,533	1,319	5,685	42,017	2,765	1,091	4,466	41,590	2,268	996	4,061
Isle of Wight	1,210	39	23	199	1,220	14	16	241	1,105	65	43	182	976	101	53	145	998	129	60	185	806	52	11	94
London	—	—	—	—	—	—	—	—	4,380	715	—	330	4,353	645	—	326	4,155	597	142	271	4,204	689	97	283
Warley	619	60	7	119	1,020	81	15	211	1,228	91	11	268	824	76	14	149	661	40	26	52	600	33	15	68
Hounslow	514	12	9	16	524	11	16	39	498	31	16	48	416	44	29	34	483	41	12	41	536	47	17	47
Pembroke Dock	419	35	9	24	748	33	4	39	968	27	9	93	1,243	44	18	104	1,035	53	3	66	772	42	18	89
Sheffield	703	66	31	89	595	63	24	75	800	130	23	227	801	86	26	152	644	94	17	93	689	53	12	90
Manchester	940	119	54	142	813	75	36	120	1,021	181	28	244	1,142	132	62	129	914	146	49	100	1,084	100	54	144
Preston	1,063	88	28	214	847	64	15	109	1,065	93	35	192	883	77	47	161	874	150	45	178	558	75	16	83
Edinburgh	1,175	132	16	155	1,059	61	16	86	1,024	65	22	132	1,118	51	17	91	1,055	63	18	87	1,056	105	35	124
Fermoy	888	39	14	40	844	30	26	53	1,077	75	14	101	867	41	15	87	872	101	19	70	1,271	110	50	65
Limerick	813	58	31	143	767	37	16	42	855	100	14	91	899	103	27	103	755	41	9	36	723	96	23	57
Athlone	439	68	20	37	576	24	26	31	679	58	13	70	548	21	13	53	553	23	6	62	482	21	9	57
Dublin	4,397	659	169	626	4,986	637	157	566	5,373	695	193	656	4,898	680	201	579	4,294	772	213	549	4,495	576	193	452
Belfast	941	43	23	164	596	44	17	51	516	46	19	36	519	29	3	123	446	23	3	66	487	21	5	70
London & Windsor combined	5,391	738	162	387	5,240	791	117	322	—	—	110	—	—	—	193	—	—	—	—	—	—	—	—	—
Total	19,482	2,156	586	2,355	19,835	1,945	503	1,985	20,589	2,372	549	2,670	19,496	2,130	718	2,236	17,739	2,273	622	1,856	17,852	2,022	555	1,723

Stations.	1871.				1872.				1873.				1874.				1875.				1876.			
	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.
Devonport and Plymouth	3,200	159	49	614	2,748	161	73	421	3,036	112	59	289	2,986	108	67	185	2,575	75	64	157	2,658	71	58	247
Portsmouth	5,656	231	88	794	6,065	241	138	724	5,721	250	104	564	6,008	297	97	398	5,555	169	128	384	5,598	151	143	385
Chatham, Sheerness, and Gravesend	4,719	309	79	659	4,674	228	78	414	4,202	172	86	334	4,257	140	90	259	4,542	75	106	226	4,588	151	117	282
Woolwich	5,814	336	63	754	6,257	373	87	869	6,213	370	151	600	6,206	293	155	419	5,605	330	210	392	5,783	241	178	470
Aldershot	15,493	1,011	298	1,706	12,741	795	324	1,332	11,821	852	291	1,068	12,922	666	307	900	12,934	600	289	814	12,055	563	322	901
Windsor	1,046	81	12	55	1,035	99	14	61	1,089	92	36	58	1,037	65	34	42	972	40	67	43	956	39	24	78
Shorncliffe	2,988	87	44	245	2,738	91	60	144	2,236	47	44	136	2,438	35	64	109	2,695	48	53	80	2,748	60	47	115
Colchester	2,331	74	74	249	2,124	117	59	306	1,873	78	32	161	1,685	34	44	106	2,248	72	53	180	2,631	80	22	190
Winchester	752	22	20	75	837	48	47	55	679	18	20	46	994	38	10	65	957	26	10	66	983	20	16	85
Dover	2,750	70	40	238	2,691	127	23	203	2,365	91	27	149	2,381	87	36	164	2,300	63	43	118	2,478	75	63	112
Canterbury	985	37	20	243	891	38	16	129	1,015	20	24	108	987	36	36	63	1,138	14	39	76	1,408	38	19	80
Maidstone	338	15	8	19	331	19	3	51	272	16	3	33	212	14	7	11	138	1	2	5	108	3	4	2
Cork	2,345	129	37	213	2,596	161	57	218	2,525	153	47	168	2,116	54	28	85	2,689	57	41	101	2,520	54	42	150
Curragh	5,714	202	100	390	5,067	254	66	363	4,990	149	45	234	3,962	182	99	164	4,258	147	90	183	4,112	76	66	205
Total	54,090	2,763	932	6,254	50,794	2,752	1,045	5,290	48,039	2,420	969	3,946	46,136	2,039	1,074	2,968	46,606	1,717	1,195	2,825	46,620	1,622	1,121	3,302
Isle of Wight	1,147	76	28	147	1,190	68	71	102	1,128	42	52	75	1,206	107	63	142	1,222	109	73	68	1,139	61	37	73
London	4,282	657	125	363	4,708	937	219	356	4,278	790	200	381	3,996	716	177	412	3,897	780	185	373	3,735	545	170	366
Warley	1,073	61	22	127	711	47	26	81	953	21	7	77	941	30	23	73	819	30	11	70	824	42	13	79
Hounslow	753	34	23	41	667	60	13	50	631	42	6	43	663	45	5	34	660	16	6	29	666	50	8	39
Pembroke Dock	1,057	30	24	98	935	25	28	51	1,282	32	54	61	1,359	29	72	69	1,218	38	38	43	972	28	38	47
Sheffield	730	92	21	153	837	82	31	154	732	52	32	110	801	39	23	73	779	68	23	71	812	97	21	72
Manchester	1,133	79	30	145	944	92	12	133	1,028	94	21	115	1,058	112	20	96	1,068	96	50	115	1,063	120	45	162
Preston	916	69	30	130	874	100	27	114	834	103	17	151	672	65	46	85	749	43	71	54	819	63	77	86
Edinburgh	1,106	76	33	98	1,082	46	48	116	1,154	51	28	75	1,253	31	38	56	1,222	33	13	85	1,155	103	18	86
Fermoy	1,230	41	9	46	1,128	63	13	79	967	20	8	37	768	8	8	14	1,200	15	17	30	1,182	37	36	76
Limerick	742	42	39	76	802	80	16	63	882	69	28	84	829	48	9	22	903	23	13	29	802	38	14	41
Athlone	493	23	10	37	720	10	7	29	637	9	6	13	592	5	4	14	818	8	22	13	603	5	33	30
Dublin	4,638	545	184	575	4,914	813	161	737	4,608	629	160	569	3,946	375	138	289	4,267	311	276	370	4,062	310	224	459
Belfast	657	40	14	101	456	34	12	48	687	71	13	97	795	51	19	71	751	33	19	46	956	55	11	61
Total	19,957	1,865	592	2,137	19,950	2,467	694	2,113	19,801	2,025	632	1,888	18,879	1,661	644	1,450	19,573	1,552	817	1,405	18,790	1,554	745	1,677

Stations.	1877.				1878.				1879.				1880.				1881.				1882.			
	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.	Strength.	Primary Venereal Sores.	Secondary Syphilis.	Gonorrhœa.
Devonport and Plymouth - -	2,934	83	71	239	3,227	111	53	322	2,210	74	39	195	2,632	132	71	412	2,176	111	69	258	2,414	179	27	427
Portsmouth - -	4,575	124	94	335	5,733	84	119	372	4,127	110	72	290	4,435	338	110	537	3,863	220	96	490	4,015	247	88	485
Chatham, Sheerness, and Gravesend -	5,080	219	88	429	5,734	280	130	586	4,135	209	104	326	4,031	250	86	397	3,784	239	44	368	4,103	210	60	416
Woolwich - -	6,246	179	213	395	6,435	244	318	506	5,320	234	310	274	5,308	390	472	423	4,032	256	346	268	4,445	284	94	271
Aldershot - -	14,416	657	282	978	13,775	730	253	1,156	11,019	622	210	964	11,068	823	194	1,172	10,730	1,076	180	1,013	10,642	1,228	232	1,319
Windsor - -	1,020	82	24	77	1,096	43	44	80	1,023	47	39	72	989	105	66	78	1,025	167	55	74	954	110	68	56
Shorncliffe - -	2,932	62	68	117	3,314	136	90	143	2,339	159	72	121	2,499	215	57	140	1,617	55	35	115	1,718	84	47	131
Colchester - -	2,502	79	42	158	2,863	53	32	262	1,984	73	57	81	2,145	93	53	196	2,269	192	24	301	2,276	140	55	203
Winchester - -	1,004	18	15	119	1,129	43	21	124	1,049	24	33	66	865	39	11	76	629	33	20	62	713	47	27	62
Dover - -	3,225	62	32	178	3,244	102	32	203	2,561	93	78	145	2,286	113	38	192	2,042	102	24	142	2,152	61	55	122
Canterbury - -	1,378	26	15	107	1,460	40	13	83	1,211	41	18	83	1,224	93	18	99	1,169	101	25	171	1,391	75	28	179
Maidstone - -	119	4	1	8	146	1	1	11	156	3	3	3	209	9	3	27	220	10	7	25	199	10	5	8
Cork - - -	2,437	39	19	90	2,439	88	32	107	2,275	67	36	106	1,955	140	36	168	2,083	110	40	96	2,111	140	54	96
Curragh - -	4,554	175	96	321	5,218	280	84	397	3,237	249	65	213	4,380	541	116	470	3,919	248	102	438	4,650	330	100	424
Total - -	52,422	1,809	1,060	3,551	55,813	2,235	1,222	4,352	42,646	2,005	1,136	2,939	44,026	3,280	1,331	4,387	39,558	2,920	1,067	3,821	41,783	3,275	940	4,199
Isle of Wight -	1,092	56	43	95	1,311	66	56	79	887	50	20	45	1,013	70	12	78	835	62	10	96	773	95	21	88
London - -	3,979	660	170	598	4,246	1,060	262	640	4,284	743	182	491	4,445	1,001	223	625	4,419	967	248	507	4,419	813	181	411
Warley - -	1,129	67	11	138	722	101	19	116	440	53	20	24	479	32	14	31	297	56	4	43	542	92	19	86
Hounslow - -	621	30	16	39	774	31	22	48	751	14	14	18	873	102	12	63	818	99	17	59	750	48	12	48
Pembroke Dock -	863	14	8	56	963	12	3	44	862	13	6	36	721	46	21	64	882	85	42	76	891	62	19	60
Sheffield - -	881	56	30	90	840	81	29	137	689	91	44	139	664	102	37	88	680	190	28	138	646	170	24	144
Manchester - -	1,198	157	69	214	1,199	246	42	212	825	169	39	100	943	219	66	170	936	213	61	169	992	285	39	244
Preston - -	848	65	71	96	965	70	55	141	666	38	63	79	716	70	22	159	614	64	13	44	728	50	13	51
Edinburgh - -	1,122	53	43	74	1,366	98	50	137	1,188	95	53	131	1,112	83	48	132	1,205	113	37	111	1,059	108	34	117
Fermoy - -	886	26	25	42	694	18	24	52	811	27	12	68	513	48	11	33	1,137	95	18	91	1,030	71	33	50
Limerick - -	845	63	11	79	918	78	30	96	755	21	18	46	763	47	16	48	1,062	152	56	86	1,215	99	21	98
Athlone - -	709	25	24	41	760	23	38	54	647	10	9	34	655	32	8	35	832	30	19	54	782	12	23	48
Dublin - -	4,131	425	156	574	5,067	779	238	639	4,477	523	190	422	4,357	940	140	605	4,877	1,261	208	753	4,841	1,474	282	1,044
Belfast - -	772	33	18	96	924	61	5	113	776	96	21	86	800	218	38	124	1,049	192	43	177	781	102	18	129
Total	19,076	1,730	693	2,234	20,749	2,723	873	2,503	18,058	1,943	691	1,719	18,024	3,010	668	2,305	19,643	3,559	804	2,403	19,449	3,481	739	2,018

APPENDIX No. XVI.

THE ALEXANDER MEMORIAL FUND.

COMMITTEE.

T. CRAWFORD, Esq., M.D., Director-General, Army Medical Department, *President.*
Surgeon-General W. A. MACKINNON, C.B.
Surgeon-General T. G. BALFOUR, M.D., F.R.S.
Surgeon-General T. LONGMORE, Hon. Surgeon to the Queen, Professor of Military Surgery.
Deputy Surgeon-General J. A. BOSTOCK, C.B., Hon. Surgeon to the Queen.
Brigade-Surgeon ALFRED F. S. CLARKE, M.D.
Surgeon-Major F. S. B. F. DE CHAUMONT, M.D., F.R.S., Professor of Military Hygiene.
Inspector-General of Hospitals, R. LAWSON.
Surgeon-General WM. RUTHERFORD, C.B., M.D., Hon. Physician to the Queen.
Surgeon-General WM. MUNRO, C.B., M.D.
Surgeon-General J. IRVINE, M.D.
Brigade-Surgeon FRANCIS COLLINS, M.D.

Surgeon-Major W. JOHNSTON, M.D., *Honorary Secretary.*

AT a meeting of the Committee, held at the Army Medical Department, 6, Whitehall Yard, August 19th, 1882, it was unanimously resolved that the Prize of 50*l.* and a Gold Medal of the value of 10*l.* be awarded to Surgeon-Major Francis H. Welch, A.M.D., for the best Essay "On the prevalence of "enteric fever in the Army, its etiology, pathology, and treatment; to be "illustrated by the personal observation of the author."

At an adjourned meeting of the Committee held on the 12th September 1882 it was determined that the subject for the next competition should be "On antiseptic surgery, and its application in Military Hospitals and in the "Field"; and that a Prize of 50*l.* and a Gold Medal of the value of 10*l.* be offered for the best Essay written thereon.

Essays to be despatched so as to reach the President of the Committee on or before the 31st December 1884.

Essays are to be legibly and clearly written, superscribed with a brief motto, and accompanied by a sealed envelope, similarly superscribed, containing the name and address of the author.

The competition to be limited to Executive Medical Officers of the Army on full-pay, but Assistant Professors at Netley are not allowed to compete while so employed.

The relative merits of the Essays to be determined by Assessors to be selected by the Committee.

The Prize to be awarded for the best Essay offered, without reference to the number of competitors, provided the writer has complied with the prescribed conditions.

It is regretted that in the last volume of the Reports of the Army Medical Department, 31st Dec. 1883, was stated to be the latest date on which Essays could be received, instead of 31st Dec. 1884.

LONDON: Printed by EYRE and SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.

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